DOCUMENT RESUME

ED 482 872 PS 031 711

TITLE	The Long-Term Impact of Words Work! A Five-Year Academic Comparison of Words Work! and Non-Words Work! Ramsey Action Programs Head Start Children in the St. Paul Public Schools.
INSTITUTION	Saint Paul Foundation, St. Paul, MN.
PUB DATE	2003-06-00
NOTE	102p.; Prepared by the Action Consulting and Evaluation Team. Support provided by the F.R. Bigelow Foundation; Katherine B. Andersen Fund; and Mardag Foundation. Papers presented at the National Association for the Education of Young Children National Institute for Early Childhood Professional Development (12th, Portland, OR, June 15-18, 2003).
PUB TYPE	Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC05 Plus Postage.
DESCRIPTORS	Comparative Analysis; Early Intervention; *Elementary School Students; *Emergent Literacy; Longitudinal Studies; Mathematics Achievement; *Partnerships in Education; *Preschool Children; Program Descriptions; Program Evaluation; Reading Achievement; Standardized Tests
IDENTIFIERS	Project Head Start

ABSTRACT

The Words Work! early literacy initiative, in Ramsey Action Program (RAP) Head Start centers, was initiated to prepare children to be successful third-grade readers and mathematicians. These reports [document includes Year Two Analysis and Words Work! Three-Year Evaluation Report, September 1999-May 2002] reflect the standardized test results collected in years 1 and 2 for the first cohort of Words Work! children from four RAP Head Start centers who recently completed first and second grade, respectively, in St. Paul, Minnesota public schools. Three comparison groups were identified for the evaluations: (1) non-Words Work! RAP Head Start children in 10 centers; (2) children who were on the RAP waiting list; and (3) a random sample of non-Head Start children. Test scores were adjusted based on the average demographic characteristics of children across all study groups. An analysis of variance model was used to compare the group means. Based on this model, Words Work! children, on average, performed at a higher level than those in all three comparison groups in reading, mathematics, and language arts. Mathematics appeared to be the strongest subject for Words Work! children, followed by reading and language arts. The third-year evaluation report notes continued performance of subjects at higher levels than comparison groups, and also evaluates specific program characteristics. The findings from the study suggest that Head Start programs that utilize Words Work! literacy-rich environments can make a difference. The report's three appendices include information on ethnicity and language characteristics of each study group, examples of adjusted scores, and confidence intervals. (Contains 28 footnotes across the 3 reports.) (Author/KB)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 482 872

The Long-term Impact of Words Work!

A five-year academic comparison of Words Work! and non-Words Work! Ramsey Action Programs Head Start children in the St. Paul Public Schools.

An Early Literacy Program for Children in Saint Paul

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

John G. Couchman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Prepared by the Action Consulting and Evaluation Team

6312 Ashcroft Lane
Edina, MN 55424
Phone: (952) 922-1811
(952) 922-0005
Fax: (952) 922-1911
Email: acetinc@mn.rr.com

ED 482 872

BEST COPY AVAILABLE

ABSTRACT

The Words Work! early literacy initiative, in Ramsey Action Program (RAP) Head Start centers, was initiated three years ago to prepare children to be successful third grade readers and mathematicians. This report reflects the standardized test results collected for the first cohort of Words Work! children who recently completed first grade in St. Paul Public Schools. Three comparison groups were identified for this study: non-Words Work! RAP Head Start children, children who were on the RAP waiting list, and a random sample of non-Head Start children. Test scores were adjusted based on the average demographic characteristics of children across all study groups. An analysis of variance model was used to compare the group means. Based on this model, Words Work! children, on average, performed at a higher level than all three-comparison groups in Reading, Mathematics, and Language Arts. Mathematics appeared to be the strongest subject for Words Work! children, followed by Reading and Language Arts. The results from this study suggest that Head Start programs that utilize Words Work! literacy rich environments can make a difference.

INTRODUCTION

The long-term outcome of the Words Work! early literacy initiative is to prepare children to be successful third grade readers and mathematicians[1]. In order to measure this outcome, the St. Paul Foundation contracted with the Action Consulting and Evaluation Team (ACET, Inc.) to perform longitudinal analysis of children's test scores over the course of five years. These scores will be obtained to address the following research questions:

- *What is the performance level of Words Work! children compared to non-Words Work! Ramsey Action Programs (RAP) Head Start children?*
- *What is the performance level of Words Work! and non-Words Work! children compared to non-Head Start children and children who were on the RAP Head Start waiting list?*

This report reflects test results collected for the first cohort of Words Work! children who have recently completed first grade. Test scores will be analyzed for two additional cohorts over the next four years. The evaluation team will first describe the research design and sampling procedures, next address the two research questions posed above, and then conclude with implications of the study, plans for future analyses, and report limitations.

The Research Design

The evaluation team was provided a master list of all RAP Head Start children from the RAP Head Start office. There are currently 14 RAP Head Start centers, four Words Work! and ten non-Words Work! centers[2]. Most of the RAP Head Start graduates were enrolled in St. Paul public schools, while others entered charter schools or neighboring district schools. Only

---

[1]

[2] The four centers were chosen to best represent children enrolled at RAP Head Start.

children enrolled in St. Paul Public Schools were tracked because of the uniform administration of the Metropolitan Achievement Test, Seventh Edition (MAT7)[3]. The design includes following three cohorts of Words Work! children from third through fifth grade, given the cohort being followed (see Table 1 below)[4].

Table 1: Year in the Longitudinal Design

Year	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Age	***Grade Level - St. Paul Public Schools***						
6	Words Work!	K	1	2	3	4	5
5	Words Work!	Words Work!	K	1	2	3	4
4	Words Work!	Words Work!	Words Work!	K	1	2	3

Sampling Procedures

Three comparison groups were identified as critical references to evaluate the academic performance of WordsWork! children[5].

- Group 1: Non-Words Work! RAP Head Start children;
- Group 2: Children on the RAP Head Start waiting list; and
- Group 3: A sample of non-Head Start children in St. Paul Public Schools.

Group 1 children were eligible and received RAP Head Start services. Group 2 children were eligible but had never received RAP Head Start services. Both of these groups were similar to WordsWork! children in background characteristics (i.e., primarily students of color with limited English from families with low incomes). The last comparison group provided a sample in the same age category that had not participated in RAP Head Start to represent typical St. Paul Public Schools' children.

During the first year of Words Work!, 604 children graduated from RAP Head Start. Of those, 163 (27%) were from WordsWork! and 441 (73%) from non-WordsWork! centers. A total of 146 children were on the RAP Head Start waiting list. The evaluation team located 72 percent of the Words Work! children enrolled in 42 of the 64 elementary schools and centers with first

[3] Three charter schools in St. Paul used the same standardized test as St. Paul Public Schools. These schools, however, did not test children in first grade. The evaluation team received authorization from these schools to pull test scores, if available, for subsequent years.

[4] This table can be read as follows: For children who participated in Words Work! and are currently six years old, most of them recently completed First grade in St. Paul Public Schools (as of June 2002). The evaluation team will follow them through fifth grade. Words Work! children who are currently five years old will enter First grade next year (2002-2003). The team will follow them through fourth grade. Finally, Words Work! children who are currently four years old will enter kindergarten in 2002-2003. The team will follow them until third grade. Length of membership with Words Work! (i.e., first year, second year, third year) will be coded.

[5] The evaluation team did not use a predecessor group (i.e. cohort of children from the year prior to the start of Words Work!) in the study since such a comparison group would be comprised of a different group of children in a different year. Thus, analyzing their performance differences may simply be a product of those two factors.

grade programs in the St. Paul Public Schools[6]. For the comparison groups, 53 percent of non-Words Work! children were located in 53 schools and 55 percent of children on the RAP waiting list were found in 34 schools. A sample of 300 children that were not associated with RAP Head Start was randomly drawn from 50 St. Paul Public Schools[7]. Table 2 below shows the sample size distributions for each study group.

Table 2. Sample Size Distributions

Study Group	Cohort	Located	Percent of Cohort	Number of Schools
Words Work!	**163**	**118**	**72%**	**42**
Non-Words Work!	441	234	53%	53
Wait List	146	80	55%	34
Non-Head Start	3144	300	10%	50

Once children were located, their MAT7 scores were extracted from the St. Paul Public Schools' database[8]. The MAT7 has been reviewed for its adequacy as a measure of academic school success and its appropriateness for use in this longitudinal research. The MAT7 is primarily a norm-referenced test designed to provide normative information on performance of students nationwide. Three tests were used for the study: Reading, Mathematics, and Language Arts[9].

- **Reading** – Measures age-appropriate reading skills including word recognition, reading vocabulary, and reading comprehension. The reading comprehension test is a group-administered silent reading inventory designed to provide an estimate of functional reading levels. Each test consists of a series of graded reading passages ranging from well below grade-level to well above grade-level, followed by comprehension questions.
- **Mathematics** – Assesses basic concepts of number and units, shapes, and money, as well as age-appropriate mathematic items that address problem solving and other mathematical procedures.
- **Language Arts** – Measures age-appropriate language skills in the areas of prewriting, composing, and editing.

Of the 118 Words Work! children located, 106 (90%) had test scores available; of 234 Head Start children, 217 (93%) had scores; and of the 80 waitlist children, 68 (85%) had scores. All 300 children drawn from the St. Paul database had MAT7 scores available.

---

[6] Within these distributions, only six schools contained five or more children who participated in Words Work!

[7] The sample size of 300 was selected to create a group approximately the size of the entire Head Start cohort (Words Work! plus non-Words Work!) and to provide for the potential mobility of children to retain a large enough comparison cohort without over-powering the analyses with a much larger group. This group will be retained over the next four years for continuity in the longitudinal analyses.

[8] St. Paul Public Schools administers the MAT7 in the spring of each year to all students enrolled in grades one through ten as part of its accountability system. Exemptions are granted for students with moderate to severe disabilities, while other special accommodations, such as limited English proficiency, are provided where appropriate. Scores of students who take the MAT7 with special accommodations were not released by St. Paul Public Schools.

[9] The reading test has the highest reliability index score of 0.95, followed by mathematics at 0.88, and then language arts at 0.83.

In addition to test scores, the following available demographic characteristics were extracted for each study group:

- Gender
- Race/ethnicity
- English Language Learner indicator
- Home primary language
- Primary disability
- Special education instructional setting
- Economic indicator
- Title I student indicator

These variables were selected by both RAP Head Start staff and the evaluation team to determine their relevance in helping explain differences in MAT7 performance[10]. Table 3 provides the distribution of children in the study groups for each demographic characteristic. As the table displays, RAP Head Start children included more children of color, children who participated in free or reduced lunch, and children with limited English proficiency.

Table 3: Distribution of Demographic Characteristics across Study Groups

Demographic		WordsWork!	Non-WordsWork!	Waitlist	Non-Head Start
	N =	118	234	80	300
Gender	Female	65%	53%	44%	42%
	Male	36%	47%	56%	58%
Children of Color*	Yes	94%	94%	91%	63%
	No	6%	6%	9%	37%
Limited English*	Yes	64%	75%	56%	32%
	No	36%	25%	44%	68%
Special Ed	Yes	4%	3%	9%	11%
	No	96%	97%	91%	89%
Free/Reduced Lunch	Yes	97%	93%	94%	64%
	No	3%	7%	6%	36%
Title I	Yes	86%	89%	86%	76%
	No	14%	11%	14%	24%

* Appendix A contains the number and percent of each ethnicity and language by study group

To account for the impact of these variables on test scores, the methodology employed was a multivariate analysis of variance to evaluate mean differences based on study group: Words Work!, non-WordsWork! Head Start, Head Start waiting list, and non-Head Start. The performance of these four groups was compared by computing adjusted scores; these scores were based on the average demographic characteristics of children across all study groups[11].

[10] A large body of research has repeatedly demonstrated the importance of variables that embody economic, language, and in some cases, gender differences. For a review, see Haladyna, T. M. (2002). Essentials of standardized achievement testing: Validity and accountability. Boston, MA: Allyn & Bacon. See particularly Chapter 9: Standardized achievement testing of students at risk, pp. 172-190.

[11] The differences between each group based on adjusted scores provided more accurate portrayals of differences in performance than those found using observed scores. See Appendix B for a complete description of adjusted means.

RESULTS

Research questions:

- *What is the performance level of Words Work! children compared to non-Words Work! Ramsey Action Programs (RAP) Head Start children?*
- *What is the performance level of Words Work! and non-Words Work! children compared to non-Head Start children and children who were on the RAP Head Start waiting list?*

Words Work! children performed statistically higher in Reading and Mathematics than non-Words Work! children. Words Work! children scored 13 Normal Curve Equivalent (NCE) points above non-WordsWork! children in Reading, 15 more in Mathematics, and 10 more in Language Arts[12]. The differences were smaller between WordsWork! and non-Head Start children, with Words Work! children scoring seven NCE points higher in Reading, 12 in Mathematics, and four in Language Arts. Words Work! children did score statistically higher in Mathematics than non-Head Start children.

The strongest subject for Words Work! children was Mathematics, followed by Reading and Language Arts. Mean performance scores can be seen in Table 4, based on adjusted NCE scores[13]. Statistically significant differences between Words Work! and the other comparison groups are noted with an asterisk (Appendix # displays the confidence intervals for each test).

Table 4. Adjusted (for Demographics) Group Mean Performance for Each Test

				90% Confidence Interval	
Test	Study Group	*Mean*	*Error*	*Lower*	*Upper*
Reading	**WordsWork!**	**54.3**	**3.6**	**48.5**	**60.1**
	Non-Words Work!*	41.7	2.7	37.3	46.1
	Waitlist	42.7	3.6	36.8	48.6
	Non-Head Start	47.6	1.7	44.9	50.3
Mathematics	**WordsWork!**	**57.7**	**4.8**	**49.8**	**65.6**
	Non-Words Work!*	42.9	3.6	36.9	48.9
	Waitlist	41.9	4.9	33.9	49.9
	Non-Head Start*	45.6	2.2	41.9	49.3
Language Arts	**WordsWork!**	**49.2**	**3.8**	**42.9**	**55.5**
	Non-Words Work!	38.9	2.9	34.2	43.6
	Waitlist	40.4	3.9	34.0	46.8
	Non-Head Start	44.9	1.8	42.0	47.8

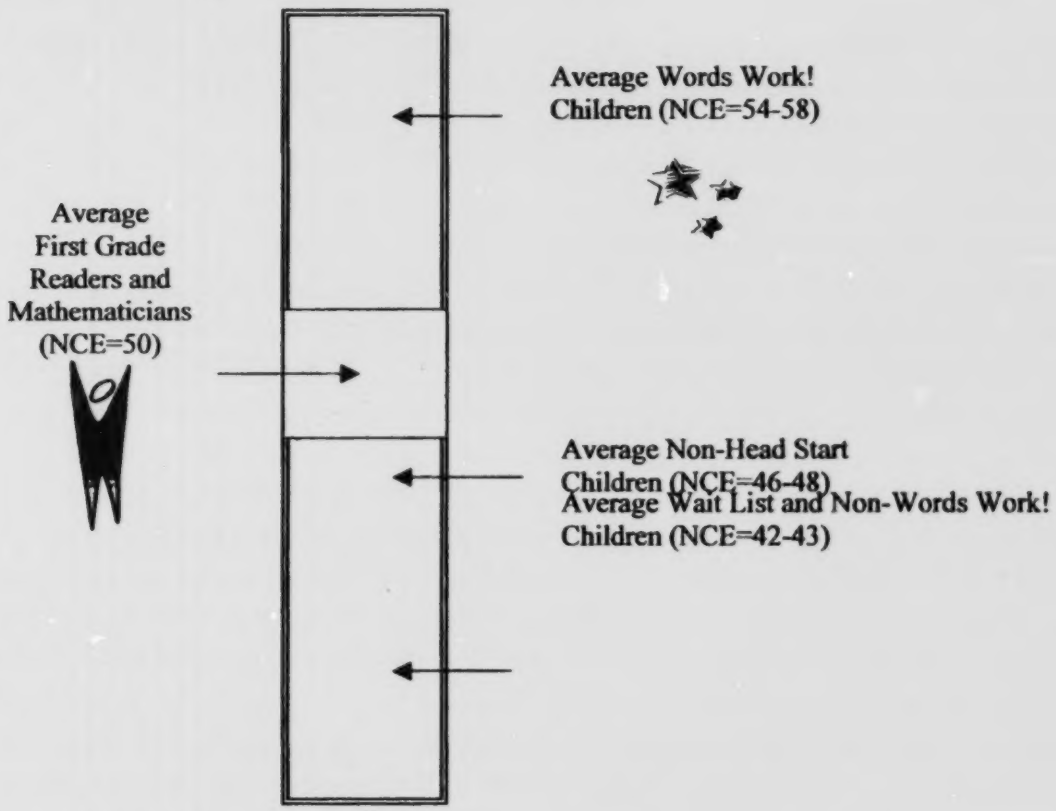
* Statistically significant at 0.10.

[12] NCE scores are on interval level measurements whereas percentiles are ordinal and they are the scores typically reported by St. Paul Public Schools (as can be seen on their website). NCE scores also have a slight interpretive advantage over scaled scores because the national average is 50 – a clear and easily defined reference point for comparison purposes.

[13] These are not actual observed scores, but scores that account for differences due to demographic differences.

On average, Works Work! children performed at a higher level than children in the three comparison groups. This trend was similar on all three tests, with WordsWork! children performing at the highest level, non-Head Start children performing slightly below WordsWork! children, Head Start children performing below both of those groups and waitlist children performing at the same level as Head Start children (see Figure 1 below).

Figure 1. Group Performance Based on Adjusted NCE Mean Differences (the ruler extends plus or minus 10 NCE points around the average)



Individual centers did not contribute significantly to student performance beyond what was found based on WordsWork! and non-WordsWork! status.

BEST COPY AVAILABLE

CONCLUSIONS

Words Work! has improved children's performance as anticipated in the Reading and Mathematic sections of the MAT7. In all three subject areas of the MAT7, Words Work! children performed at a higher level than non-Words Work! Head Start children, statistically higher for Reading and Mathematics. Mathematics appeared to be the strongest subject for Words Work! children, followed by Reading and Language Arts. Within all the study groups, Words Work! children performed at the highest level, followed by non-Head Start children, and then by non-Words Work! Head Start and Head Start waiting list children who performed at similar levels. The results from this study suggest that Head Start programs that receive Words Work! literacy rich environments can make a difference.

Future Analyses

The analyses completed to date were group comparisons based on the first grade performance of the first Words Work! cohort. Future analyses will include additional cohorts, time points, and an evaluation of the impact of Words Work! given the level of implementation and role of the family home visitor component.

Additional Cohorts – The strength of these differences will be evaluated over time and in future cohorts of Words Work! children. This will provide greater evidence of the lasting impact of Words Work! participation. As each Words Work! cohort progresses through the St. Paul public schools, standardized test data will be gathered annually. The second grade students will then have test scores from first grade and second grade. At this point, the appropriate analytic model will be a regression with first-grade scores used as a covariate to adjust for pre-existing differences. This will allow the evaluation team to determine the impact of participation in Words Work! on growth rates in elementary school performance. Once three years of MAT7 scores are available, stronger techniques will be employed to estimate growth curves for students (e.g., Hierarchical Linear Modeling)[14].

Adoption of Words Work! Practices at Non-Words Work! Centers – Words Work! has become a RAP Head Start county wide initiative. Blending of early literacy programs has occurred in 2001-2002 across all Head Start centers. To complete the evaluation of center differences in future cohorts, center surveys and site visits have been conducted during the 2001-2002 school year to assess the degree of blending and implementation of WordsWork! activities (see Spring 2002 Site Visit Report). This blending will create more difficulty to assess the impact of Words Work!, essentially by eliminating non-Words Work! Head Start centers. However, the assessment of the extent of blending will provide evidence of the impact of Words Work! based on degree of implementation. Through these analyses, the evaluation team will be able to assess the relationship between levels of Words Work! adoption and performance.

---

[14] Hierarchical linear modeling (HLM) offers several advantages not available in other standard models, including the appropriate treatment of missing data (some students may not have MAT7 scores at each time point) and unbalanced data (there are likely to be more non-Words Work! children than children in other groups in the evaluation follow-along as time progresses). In addition, the statistical techniques available in HLM provide superior estimation of effects and relationships above current standard regression or analysis of variance techniques.

Family Involvement – One of the proposed research questions was about the long-term impact of the Words Work! Family Home Visit component. Of those children who received a home visit during their participation in Words Work!, is there a relationship between Home Involvement scores and MAT7 performance? This question will be evaluated based on an analysis of variance model for those children in Words Work! who received home visits. The home visitor component, however, was not in effect during the first year of Words Work! Family Home Visitor data is available and has been coded for the next cohort of students entering first grade in 2002.

Limitations

The limitations of this study are similar to others that are not based on experimental studies:

Participants were not randomly assigned to Words Work! – Nonrandom assignment presents challenges in making the argument that the initiative is what made the difference, rather than individual characteristics of students. To address this limitation, the evaluation team employed five demographic characteristics that have a research base to help account for this difference.

Impact of individual Schools – The assumption is that some schools may facilitate children's academic performance at a higher level than others schools. In order to factor this difference, the evaluation team needed an adequate sample of children enrolled at each school. Unfortunately, this was not possible given the sample distribution. Thus, school level characteristics could not be used in the analyses.

Small sample sizes in some groups – In an effort to adjust for small sample sizes, the statistical tests used in this study may be overly conservative (assuming a small sample from an infinite population). There are other statistical adjustments that could be made for finite (small) populations that would give us results at a much higher level of significance. However, the evaluation team decided to retain the current results to allow for more tentative conservative interpretations.

Missing test scores – There were a small number of Head Start students located in St. Paul Public Schools without MAT7 scores or had special testing accommodations. The impact of these students is likely to be small. The statistical precision of each group mean presented in this report takes into consideration the smaller sample size, recognizing that the students with test scores is a sample of the entire cohort that could have taken each test.

Reliance on MAT7 performance – As reported earlier, the reading test has the highest score reliability of 0.95, followed by mathematics at 0.88, and then language arts at 0.83. These reliabilities are fairly high for first grade students, since young children rarely produce reliable scores – their performances change dramatically from one testing session to the next. Over time, these reliability results improve and scores become more dependable. Although there are strong arguments against reliance on standardized testing for assessing performance of young children, there are few options in this setting. These results are only one snapshot of the potential impact that Words Work! has on participants.

Appendix A
Ethnicity and Language

Number and Percent of Each Ethnicity by Study Group

	Words Work!	Non-Words Work!	Waitlist	Non-Head Start
American Indian	1 (21%)	1 (0%)	3 (4%)	6 (2%)
Asian American	56 (48%)	151 (65%)	32 (40%)	67 (22%)
Hispanic American	15 (13%)	23 (10%)	10 (13%)	33 (11%)
African American	39 (33%)	45 (19%)	28 (35%)	82 (27%)
Caucasian	7 (6%)	14 (6%)	7 (9%)	112 (37%)
Total	118	234	80	300

Number and Percent of Home Language by Study Group

	Words Work!	Non-Words Work!	Waitlist	Non-Head Start
English	43 (36%)	57 (24%)	35 (44%)	205 (68%)
Hmong	53 (45%)	146 (62%)	31 (39%)	52 (17%)
Other Asian	3 (3%)	5 (2%)	1 (1%)	11 (4%)
Spanish	13 (11%)	20 (9%)	9 (11%)	23 (8%)
Somali	3 (3%)	0 (0%)	0 (0%)	4 (1%)
Other	3 (3%)	6 (3%)	3 (4%)	4 (1%)
Unknown	0 (0%)	0 (0%)	1 (1%)	1 (0%)
Total	118	234	80	300

Appendix B
Example of Adjusted Scores

Consider a study of art performance for students who are Left or Right Handed. Consider the following table of results reporting mean scores and sample sizes:

Mean (N)	Left Handed	Right Handed
Girls	230 (10)	220 (90)
Boys	210 (40)	200 (10)

In total, there are 150 students, 50 Left Handed, 100 Right Handed, 100 Girls, 50 Boys. The Left Handed Girls performed the best (230); the Right Handed Boys performed the poorest (200).

The mean score for Left Handed students is $\frac{(230\times 10)+(210\times 40)}{10+40}=214$.

The mean score for Right Handed students is $\frac{(220\times 90)+(200\times 10)}{90+10}=218$.

Notice that Left Handed students scored 4 points lower than Right Handed students, even though Left Handed students, whether a Girl or Boy, scored 10 points higher than Right Handed students. The discrepancy is because Girls score 20 points higher than Boys, regardless of handedness; and Right Handed students are primarily Girls. The benefit of being Left Handed is overwhelmed by the deficit of being a Boy, while the deficit of being Right Handed is overwhelmed by the benefit of being a Girl.

There exists a statistical adjustment to correct for such an imbalance, resulting in adjusted means. These are basically the same as predicted values from a regression or general linear model. Typically, one would enter the mean value of each demographic variable to estimate the mean response for all combinations of the variables employed in the model and then take simple means over the levels of categorical variable of interest – evaluation group in our case.

The adjusted means will be a weighted average of the cell means with Girls given the weight of 100/150 and Boys given the weight of 50/100.

For Left Handed students, the adjusted mean is $\left(230\times\frac{100}{150}\right)+\left(210\times\frac{50}{150}\right)=223.3$.

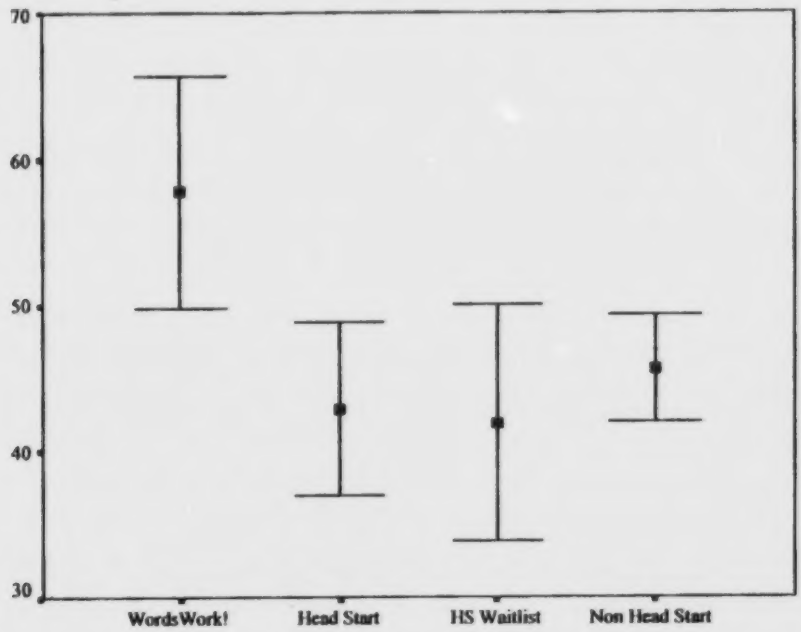
For Right Handed students, the adjusted mean is $\left(210\times\frac{100}{150}\right)+\left(200\times\frac{50}{150}\right)=213.3$.

Notice that the differences in the adjusted means captures the 10 point differences found between Left and Right Handed students for each gender, the opposite result of the simple means.

Appendix C
Confidence Intervals

In cases where the confidence intervals did not overlap, the evaluation team is 90 percent confident that the corresponding means are different because of group membership and not because of chance sampling[15]. Please note that the smaller confidence intervals are a product of the larger samples in the non-Head Start and Head Start groups.

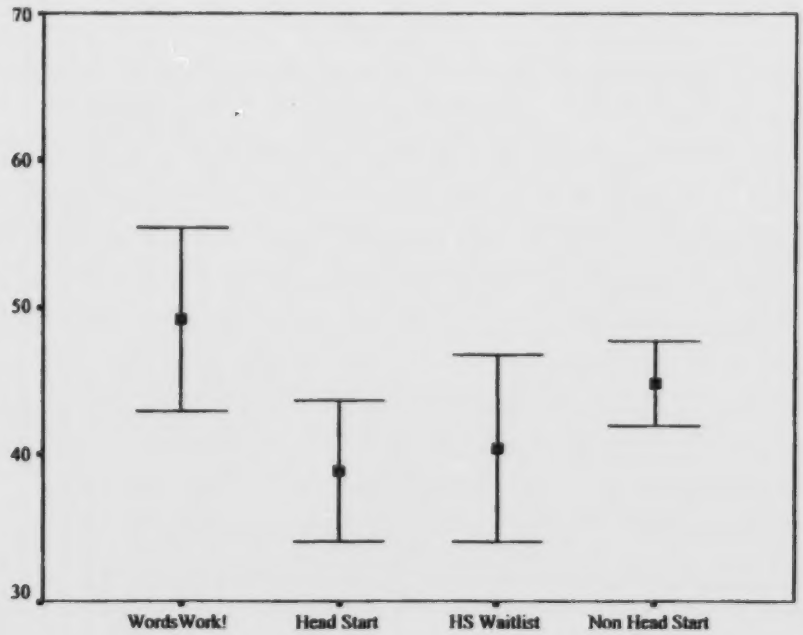
MAT7 - Mathematics



[15] The choice in level of confidence is largely arbitrary, but in educational research 90-95% is acceptable for evaluating group differences, in an attempt to uncover meaningful differences based on potentially useful interventions. By taking a more conservative level of confidence (e.g., 95% or 99%), we run the risk of making an error such that a potentially useful intervention is deemed "nonsignificant" – on the other hand with a more liberal confidence interval, we run a greater risk of wrongfully arguing an intervention is "significant" when the results are actually due to chance sampling, particularly in cases where the confidence level is less than 90%.

Mat7 – Reading

MAT7 - Language Arts



About ACET

The Action Consulting and Evaluation Team (ACET, Inc.) is an independent research group specializing in the evaluation of PK-16 educational and community-based programs. Located in Minneapolis, Minnesota, ACET contracts with a variety of professional consultants to work with clients in identifying program strengths and challenges, evaluating goal attainment, and providing recommendations for program improvement. Program evaluation activities involve both qualitative (e.g. interviews, focus groups, site-visits) and quantitative (e.g. statistical analysis, data management, surveys,) analysis. The President of ACET is Stella SiWan Cheung.

Principal Investigator – Stella SiWan Cheung has consulted with a variety of organizations including the Minnesota Department of Children, Families & Learning, the North Central Regional Educational Laboratory, and the Minneapolis Foundation. Some of her current projects include serving as Principal Investigator for the University of Minnesota Morris New Teachers New Technology Program, the Cargill Foundation/University of Minnesota Schools First Initiative, and Friendship Community Services. The New York Times and several major U.S. newspapers and local radio and television programs have cited her research and commentaries. She has presented sessions on evaluation for the U.S. Department of Education, the University of Wisconsin at Madison, and the Minnesota Association of Charter Schools. Ms. Cheung was recently announced an Arizona State University College of Liberal Arts and Sciences Leader for being a distinguished graduate. She was also named a Woodrow Wilson Fellow in 1996. She earned an M.A. in Policy Analysis and Program Evaluation at the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota.

Psychometrician – Michael C. Rodriguez is an Assistant Professor in the Department of Educational Psychology at the University of Minnesota. Dr. Rodriguez specializes in measurement and assessment, investigating issues related to construct equivalence of test items in various formats, classroom assessment practices, and assessment of achievement for students with moderate to severe impairments. He has worked extensively with schools and school districts to develop methods for improving their use of large-scale test information for planning and evaluation. He is currently conducting validity studies of several youth development program evaluation instruments. He holds a Ph.D. in Educational Measurement and Quantitative Methods from Michigan State University. Prior to obtaining his doctorate, he earned an M.A. in Public Affairs at the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota. Previously, he worked as a Research Associate with the Wilder Foundation Research Center, assisting in the development and management of social service and prevention program evaluations.

Site Visit Support – Maureen O'Dougherty specializes in cultural and linguistic diversity. Dr. O'Dougherty conducted a comprehensive evaluation of a federally funded prekindergarten program for the New York City Public Schools which had monolingual, bilingual and special needs centers. She designed qualitative instruments for classroom observations and staff interviews, trained field researchers, analyzed quantitative and qualitative data, and wrote the process and final reports. For the American Refugee Center, she designed and conducted an assessment of the extent to which higher educational preparation was incorporated in adult English Language Learning programs in the Twin Cities. Dr. O'Dougherty earned an M.A. in

English as a Second Language from the University of Minnesota and a Ph.D. in cultural anthropology from the City University of New York.

Database Support – Donna Butterbaugh is currently a fifth year Ph.D. student in the Psychological Foundations Research Methodology Program at the University of Minnesota. Her background includes a B.S. in chemistry, a Masters in teaching chemistry, and seven years of teaching high school chemistry and physics. Ms. Butterbaugh has served as a teaching assistant for the advanced level courses, as well as both a teaching assistant and instructor for the introductory level statistics courses at the University of Minnesota. She also held appointments within the Saint Paul Public Schools' Research, Evaluation, and Assessment Department, the Center for Applied Research and Educational Improvement, and the Office of Educational Accountability. Her primary research interests include the use of multilevel models for teacher and school accountability, and mathematics/science program evaluation.

Research Support – Jason Butler has consulted with a number of Minnesota charter schools and non-profit community organizations as an ACET consultant. Currently, Mr. Butler is working on a five-year longitudinal literacy study funded by the Center for the Improvement of Early Reading Achievement. His primary interests stem from his experiences as a Pre-school teacher in Northern California and include reading comprehension, early literacy development, and integration of technology into the classroom. Mr. Butler earned a B.S. in Psychology from North Dakota State University and an M.A. in Educational Psychology with a minor in Program Evaluation from the University of Minnesota.

The Long-term Impact of Words Work!
Year Two Analysis

A five-year academic comparison of Words Work! and non-Words Work! Ramsey Action Programs Head Start children in the St. Paul Public Schools.

WORDS WORK!

An Early Literacy Program for Children in Saint Paul

Prepared by the
Action Consulting and Evaluation Team

6312 Ashcroft Lane
Edina, MN 55424
Phone: (952) 922-1811
(952) 922-0005
Fax: (952) 922-1911
Email: info@acetinc.com

LB1139

August 26, 2003

ABSTRACT

The Words Work! early literacy initiative, in Ramsey Action Program (RAP) Head Start centers, was initiated four years ago to prepare children to be successful third grade readers and mathematicians. This report reflects the standardized test results collected for the first cohort of Words Work! children who recently completed both first and second grade in St. Paul Public Schools. The results summarized in the report represent the second year of a five year study. Three comparison groups were identified for this study: non-Words Work! RAP Head Start children, children who were on the RAP waiting list, and a random sample of non-Head Start children. Test scores were adjusted based on the average demographic characteristics of children across all study groups. A multivariate analysis of variance model was used to compare second grade 2003 group means. Based on this model, Words Work! children, on average, performed at a higher level than all three-comparison groups in Reading and Mathematics in spring 2003. The adjusted mean difference between Words Work! and non-Words Work! children was significantly higher, approximately 14 to 17 NCE points. Words Work! children were maintaining their lead in 2003. Furthermore, their rate of growth from first to second grade kept par with children from the comparison groups. The results from this study reaffirmed first year findings and strengthen the suggestion that Head Start programs that utilize Words Work! literacy rich environments can make a difference.

INTRODUCTION

This report reflects norm-referenced standardized test results collected for the first cohort of Words Work! children who have recently completed both first and second grade. The long-term outcome of the Words Work! early literacy initiative is to prepare children to be successful third grade readers and mathematicians[1]. In order to measure this outcome, the St. Paul Foundation contracted with the Action Consulting and Evaluation Team (ACET) to perform longitudinal analysis of children's test scores over the course of five years. The results in the report reflect the second of a five year study. Test scores will be analyzed for two additional cohorts over the next three years. Scores were obtained to address the following three research questions:

1. *What is the performance level of Words Work! children compared to non-Words Work! Ramsey Action Programs (RAP) Head Start children?*
2. *What is the performance level of Words Work! and non-Words Work! children compared to non-Head Start children and children who were on the RAP Head Start waiting list?*
3. *What is the performance level of Words Work! and non-Words Work! children over a five year period as compared to non-Head Start children and children who were on the RAP Head Start waiting list?*

In this report, the evaluation team will describe the research design and sampling procedures, address the three research questions posed above, and conclude with implications of the study and report limitations.

---

1 Words Work! was initiated by the F. R. Bigelow Foundation in 1998. Project funders include the Katherine B. Andersen Fund of The Saint Paul Foundation, the F. R. Bigelow Foundation, the Mardag Foundation, The Saint Paul Foundation and an anonymous donor. The

The Research Design

The evaluation team was provided a master list of all RAP Head Start children from the RAP Head Start office. There are currently 14 RAP Head Start centers, four Words Work! and ten non-Words Work! centers[2]. Most of the RAP Head Start graduates were enrolled in St. Paul public schools, while others entered charter schools or neighboring district schools. Only children enrolled in St. Paul Public Schools (SPPS) were tracked because of the uniform administration of a standardized norm-referenced test. The Stanford Achievement Test, Tenth Edition (SAT10), was the norm-referenced test administered by SPPS in 2003 to replace the Metropolitan Achievement Test, Seventh Edition (MAT7) used previously[3].

The evaluation team follows three cohorts of Words Work! children from third through fifth grade (see Table 1 below)[4].

Table 1: Year in the Longitudinal Design.

Year	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Cohort	***Grade Level - St. Paul Public Schools***						
1	Words Work!	K	1*	2*	3*	4*	5*
2	Words Work!	Words Work!	K	1	2*	3*	4*
3		Words Work!	Words Work!	K	1	2*	3*

* Test scores available for analysis

Prior to 2003, SPPS tested children in grades 1 to 10 in the MAT7 reading, mathematics, and language arts. First grade MAT7 test scores were obtained for the first cohort in spring 2002. Currently, only grades 2 to 10 are tested in the SAT10 reading and mathematics. Children in grades 4, 6, and 8 are also tested in science, social studies, and language. Only second grade SAT10 test scores were available for the first cohort in spring 2003. In spring 2004, the evaluation team will be able to extract third grade scores for cohort 1 and second grade scores from cohort 2.

[2] The four centers were chosen to best represent children enrolled at RAP Head Start.

[3] Two charter schools in St. Paul used the same standardized test as St. Paul Public Schools in 2003. These schools, however, did not test children in first grade. The evaluation team received authorization from these schools to pull test scores, if available and feasible, for subsequent years.

[4] This table can be read as follows: For children who participated in Words Work! and are in cohort 1, most of them recently completed second grade in SPPS (as of June 2003). The evaluation team will follow them through fifth grade. Words Work! children who are in cohort 2 will enter second grade next year (2003-2004). The team will follow them through fourth grade. Finally, Words Work! children who are in cohort 3 will enter first grade in 2003-2004. The team will follow them until third grade. Length of membership with Words Work! (i.e., first year versus second year) will be coded.

Sampling Procedures

Three comparison groups were identified as critical references to evaluate the academic performance of Words Work! children.

- Comparison Group 1: **Non-Words Work!** RAP Head Start children;
- Comparison Group 2: Children on the RAP Head Start **waiting list**; and
- Comparison Group 3: A sample of **non-Head Start** children in St. Paul Public Schools.

Group 1 children were eligible and received RAP Head Start services. Group 2 children were eligible but had never received RAP Head Start services. Both of these groups were similar to Words Work! children in background characteristics (i.e., primarily students of color with limited English from families with low incomes). The last comparison group provided a sample in the same age category that had not participated in RAP Head Start to represent typical SPPS children.

A majority of children tested in 2002 were located with test scores in 2003 (see Table 2 below).

Table 2: Sample Size Distributions.

Study Group	Cohort	Located 2002	Tested 2002	Tested 2003	Of those tested in 2002, % tested in 2003
Words Work!	**163**	**118**	**106**	**99**	**93%**
Non-Words Work!	441	234	217	192	88%
Wait List	146	80	68	58	85%
Non-Head Start	3144	300	300	250	83%
Total			691	599	87%

In previous years, SPPS employed the MAT7 for their district assessment program. District personnel reviewed the content specifications of several standardized tests and chose to switch to the SAT10 because of the close alignment with district curriculum in reading and mathematics. The SAT10 is very similar to the MAT7 as it is primarily a norm-referenced test designed to provide normative information on performance of students nationwide.

- **SAT10 Reading** – Measures age-appropriate reading skills including word study skills in grades two through four and grade seven, and reading vocabulary and reading comprehension across all grades. The reading comprehension test is a group-administered silent reading inventory designed to provide an estimate of functional reading levels. Each test consists of a series of graded reading passages ranging from well below grade-level to well above grade-level, followed by comprehension questions.
- **SAT10 Mathematics** – Includes age-appropriate mathematic items that address problem solving and mathematical procedures. Students in grades four through eight are allowed to use calculators for the mathematics problem solving portion of the test.

SAT10 scores were extracted from SPPS records, including demographic information to allow for changes in ELL, Title 1, and free-reduced lunch status. Table 3 below outlines the distribution of demographic characteristics across the four study groups.

Table 3: Distribution of Demographic Characteristics across Study Groups.

Demographic		Words Work!	Non-Words Work!	Waitlist	Non-Head Start	Total
Gender	Female	65.7%	57.3%	46.6%	43.2%	51.8%
	Male	34.3%	42.7%	53.4%	56.8%	48.2%
Children of Color	Yes	92.9%	93.8%	89.7%	61.6%	79.8%
	No	7.1%	6.3%	10.3%	38.4%	20.2%
English Language Learner (ELL)	Yes	65.7%	74.0%	55.2%	33.6%	53.9%
	No	34.3%	26.0%	44.8%	66.4%	46.1%
Free/Reduced Lunch	Yes	96.0%	94.3%	93.1%	61.6%	80.8%
	No	4.0%	5.7%	6.9%	38.4%	19.2%
Title 1	Yes	89.9%	91.1%	87.9%	75.6%	84.1%
	No	10.1%	8.9%	12.1%	24.4%	15.9%
	n =	99	192	58	250	599

To account for the impact of these variables on test scores, the methodology employed was a multivariate analysis of variance to evaluate mean differences based on study group membership: Words Work!, non-Words Work! Head Start, RAP Head Start Waiting List, and non-Head Start. The performance of these four groups was compared by computing adjusted scores; these scores were based on making the demographic characteristics of children across all study groups equivalent[5]. This analytic model was the same as the model employed in 2002[6]. To calculate performance over time, the evaluation team used the MAT7 first grade scores as a covariate (i.e., kept MAT7 constant) to calculate SAT10 growth from first to second grade.

[5] A large body of research has repeatedly demonstrated the importance of variables that embody economic, language, and in some cases, gender differences. For a review, see Haladyna, T. M. (2002). Essentials of standardized achievement testing: Validity and accountability. Boston, MA: Allyn & Bacon. See particularly Chapter 9: Standardized achievement testing of students at risk, pp. 172-190.

[6] The differences between each group based on adjusted scores provided more accurate portrayals of differences in performance than those found using observed scores.

RESULTS

Please note that direct comparison between 2002 and 2003 NCE points should not be made since the two are based on different tests, SAT10 and MAT7, with different scales. Both tests have slightly different definitions of reading and mathematics and employ different samples of children to compute national norm-referenced scores (see Limitations section on Page 12).

The results shown on pages 6 through 8 should be interpreted independently from the results in the previous year. To calculate growth from the previous year, the evaluation team used MAT7 performance as a covariate to predict 2003 SAT10 scores. Thus, the results from pages 9 and 10 should be interpreted in a relative manner, with non-Words Work! children as the reference point for comparing growth.

Research questions (2003 Performance):

1. *What is the performance level of Words Work! children compared to non-Words Work! Ramsey Action Programs (RAP) Head Start children?*
2. *What is the performance level of Words Work! and non-Words Work! children compared to non-Head Start children and children who were on the RAP Head Start waiting list?*

Reading

Words Work! children performed statistically higher in reading than all other groups. Specifically, Words Work! children scored

- 16.6 Normal Curve Equivalent (NCE) points above non-Words Work! children,
- 10.9 NCE points above Waitlist children, and
- 8.5 NCE points above non-Head Start children.

Mean performance scores are displayed in Table 4, based on adjusted NCE scores[7]. Statistically significant differences between Words Work! and other comparison groups are noted with an asterisk (Appendix A contains the confidence intervals).

Table 4: Adjusted (for Demographics) Group Mean Performance for SAT10 Reading.

Test	Study Group	*Mean*	*Standard Error*	*95% Confidence Interval* *Lower Bound*	*Upper Bound*
Reading	**Words Work!**	**53.5**	**3.7**	**46.3**	**60.7**
	Non-Words Work!*	37.0	2.8	31.6	42.4
	Waitlist*	42.7	3.8	35.3	50.1
	Non-Head Start*	45.0	1.8	41.5	48.6

Note. * indicates statistically significant differences from Words Work! using multivariate Least Significant Difference (LSD) comparisons at $p<0.05$.

[7] These are not actual observed scores, but scores that account for differences due to demographic differences.

Mathematics

Words Work! children performed statistically higher in mathematics than non-Words Work! children. The adjusted mean differences were smaller (non-significant) between other groups. Specifically, Words Work! children scored

- 13.6 NCE points higher (statistically significant) than non-Words Work! children[8],
- 7.8 NCE points higher than (non-significant) Waitlist children, and
- 5.7 NCE points higher (non-significant) than non-Head Start children.

Mean performance scores are displayed in Table 5, based on adjusted NCE scores[9]. Statistically significant differences between Words Work! and other comparison groups are noted with an asterisk (Appendix A contains the confidence intervals).

Table 5: Adjusted (for Demographics) Group Mean Performance for SAT10 Mathematics.

Test	Study Group	*Mean*	*Standard Error*	*95% Confidence Interval*	
				Lower Bound	*Upper Bound*
Mathematics	**Words Work!**	**52.9**	**4.2**	**44.5**	**61.2**
	Non-Words Work!*	39.3	3.2	33.0	45.5
	Waitlist	45.1	4.3	36.6	53.6
	Non-Head Start	47.1	2.1	43.0	51.3

Note. * indicates statistically significant differences from Words Work! using multivariate Least Significant Difference (LSD) comparisons at $p<0.05$.

As can be seen in the standard errors and confidence intervals (Table 5 and Appendix A), students in each group varied widely in their performance in mathematics, more so than in reading (thus the larger standard errors and wider confidence intervals)[10]. Resulting mean differences are less likely to be statistically significant, since each mean is not a complete representation of the group (because the students within each group vary in their performance in a larger range, we are less certain about the mean being a fair representation of the group as a whole).

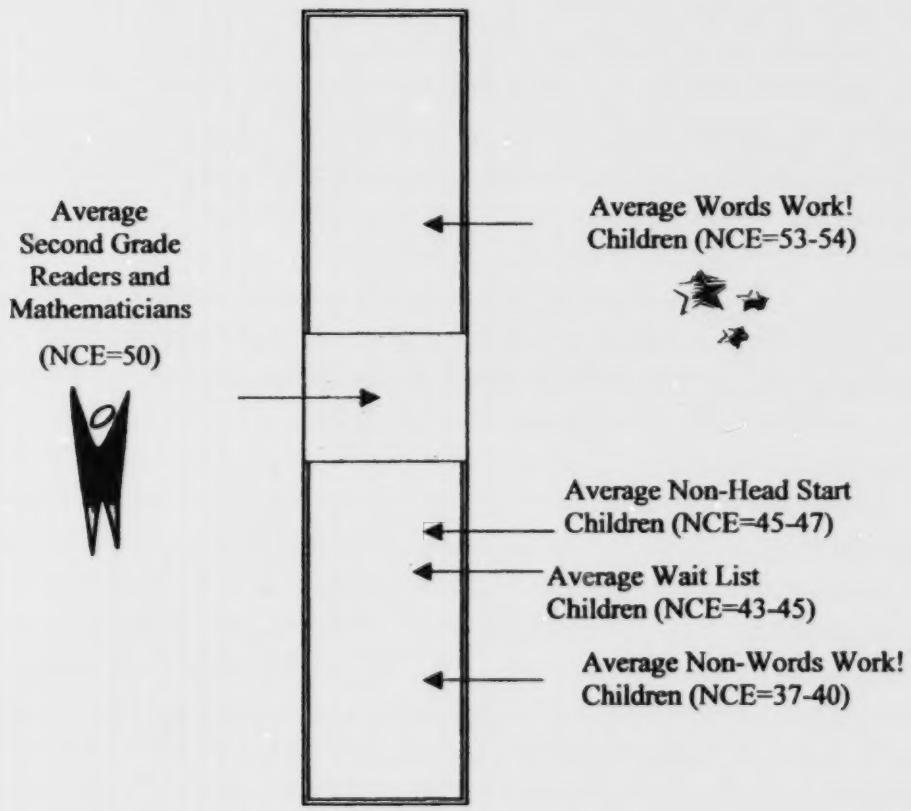
[8] NCE scores are on interval level measurements whereas percentiles are ordinal (a simple rank ordering of children); NCE points are the scores typically reported by St. Paul Public Schools (as can be seen on their website). NCE scores also have a slight interpretive advantage over scaled scores because the national average is 50 – a clear and easily defined reference point for comparison purposes.

[9] These are not actual observed scores, but scores that account for differences due to demographic differences.

[10] A confidence interval is the range of plausible values calculated within some level of error. The standard error of a variable is a measure of how far it is likely to be from the expected value (score). The standard error for Words Work! children in reading was 3.7 and 4.2 in math; the error for non-Words Work! in reading was 2.8 and 3.2 in math; error for waitlist children was 3.8 in reading and 4.3 in math; and the error for non-Head Start was 1.8 in reading and 2.1 in math.

In summary, Words Work! children maintained their lead in 2003. On average, Words Work! children performed at a higher level than children in the three comparison groups. Work! children scored similarly in both reading and mathematics, with these children performing at the highest level, followed by non-Head Start and wait list children, and Head Start children performing below all the comparison groups (see Figure 1 below).

Figure 1: Group Performance Based on Adjusted NCE Mean (the ruler extends plus or minus 12 NCE points around the average NCE of 50).


Average Second Grade Readers and Mathematicians (NCE=50)
Average Words Work! Children (NCE=53-54)
Average Non-Head Start Children (NCE=45-47)
Average Wait List Children (NCE=43-45)
Average Non-Words Work! Children (NCE=37-40)

Note: Individual centers did not contribute significantly to student performance beyond what was found based on WordsWork! and non-WordsWork! status.

BEST COPY AVAILABLE

Research Question (Growth over Time):

3. *What is the performance level of Words Work! and non-Words Work! children over a five year period as compared to non-Head Start children and children who were on the RAP Head Start waiting list?*

To address this research question, the evaluation team used MAT7 first grade test scores to calculate second grade growth for all groups tested. MAT7 first grade performance was the covariate added to the existing multivariate analysis of variance model. This method helps to determine how Words Work! children perform in second grade compared to the other groups if all children performed at the same level in first grade.

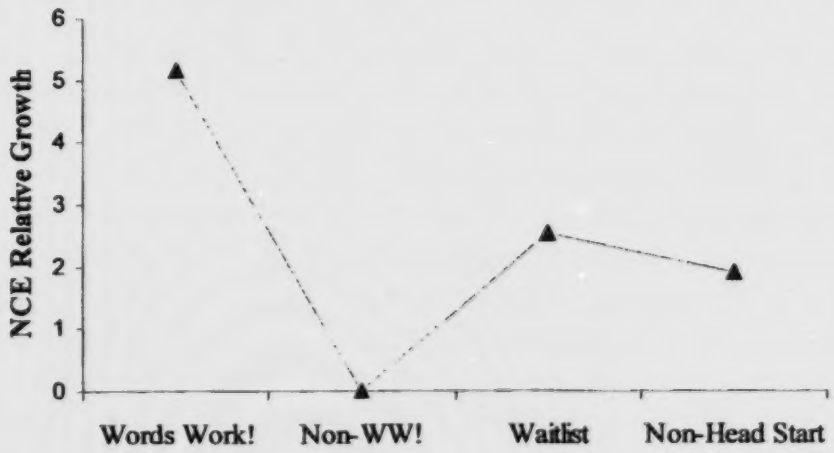
Reading

Words Work! children grew at a slightly higher rate in reading compared to all other groups from 2002 to 2003. In particular, Words Work! children grew

- 5.1 NCE points above non-Words Work! children (i.e., Words Work! children increased their first grade lead above non-Words Work! children by 5.1 NCE points),
- 3.3 NCE points above non-Head Start children, and
- 2.7 NCE points above waitlist children.

These increases, however, were small and not statistically significant. This suggests that Words Work! children are progressing at similar rates with children from the comparison groups. Figure 2 below shows the adjusted mean difference for each group once demographic and first grade performance are included (see Appendix B for the confidence intervals).

Figure 2: Adjusted (for Demographics and First Grade Performance) Group Mean Difference for Reading relative to non-Words Work! children.



Non-Words Work! growth was set at zero for comparison purposes

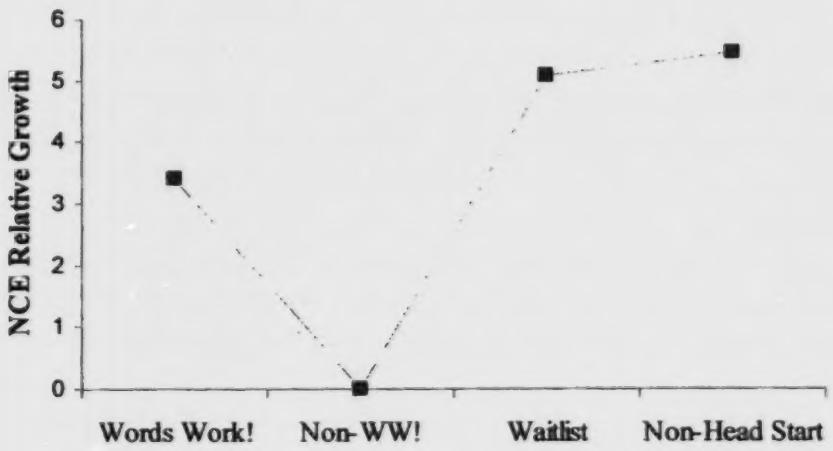
Mathematics

Words Work! children grew at a slightly higher rate in mathematics than non-Words Work! children from 2002 to 2003. However, Words Work! children grew slightly less than non-Head Start and waitlist children. In particular, Words Work! children grew

- 3.4 NCE points above non-Words Work! children (i.e., Words Work! children increased their first grade lead above non-Words Work! children by 3.4 NCE points),
- 2 NCE points below non-Head Start children, and
- 1.6 NCE points below waitlist children.

These differences again were small and not statistically significant. This suggests that Words Work! children are progressing at similar rates to others from the comparison groups. Figure 3 below shows the adjusted mean difference for each group once demographic and first grade performance are included (see Appendix B for the Confidence Intervals).

Figure 3: Adjusted (for Demographics and First Grade Performance) Group Mean Difference for Mathematics relative to non-Words Work! children.



Non-Words Work! growth was set at zero for comparison purposes

CONCLUSIONS

The Words Work! Initiative continues to improve children's performance in Reading and Mathematics. For both years, Words Work! children scored significantly higher than non-Words Work! children. The adjusted mean difference between Words Work! and non-Words Work! children was large, approximately 14-17 NCE points. Words Work! children performed at the highest level, maintaining their lead in 2003, followed by non-Head Start and wait list children, and Head Start children below all other comparison groups. The rate of growth for Words Work! children is also promising. Words Work! children are able to continue their performance at similar rates to children from the comparison groups. This upward trend suggests that the Words Work! Initiative continues to impact student performance over a two year period.

Limitations

The limitations of this study are similar to others that are not based on experimental studies.

Change of measurement instruments from MAT7 to SAT10 – The MAT7 and SAT10 normative scores were not equated with each other. A direct comparison from year to year cannot be made between the two tests. The MAT7 and SAT10, however, are both based on common national goals and objectives in reading and mathematics. The SAT10 was selected by SPPS to replace the MAT7 used previously. The district decided that the SAT10 is more closely aligned with district curriculum. In the long run, this may mean that the SAT10 will be more sensitive to instruction and more closely measure growth and development in reading and mathematics for children in SPPS.

Participants were not randomly assigned to Words Work! – Nonrandom assignment presents challenges in making the argument that the initiative is what made the difference, rather than individual characteristics of children. To address this limitation, the evaluation team employed five demographic characteristics that have a research base to help account for this difference.

Impact of individual Schools – The assumption is that some schools may facilitate children's academic performance at a higher level than others schools. This impact may become greater as children spend more years in specific schools – schools will have a longer period in which to make unique impacts upon children in their care. In order to factor this difference, the evaluation team needed an adequate sample of children enrolled at each school. Unfortunately, this was not possible given the sample distribution. Thus, school level characteristics could not be used in the analyses.

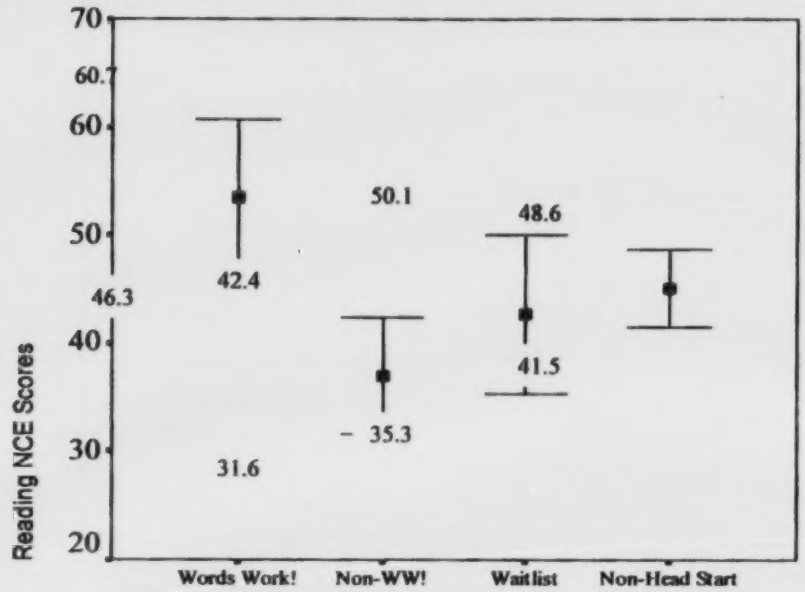
Comparison Group Experiences – Two of the comparison groups constitute unknown characteristics, including non-Head Start and waitlist children. The non-Head Start sample was selected randomly from SPPS. Children from the waiting list, however, were not selected at random. Further, both groups may have participated in another pre-school program or childcare center prior to beginning kindergarten. As such, we cannot be sure that both groups did not receive some other preschool intervention prior to enrollment.

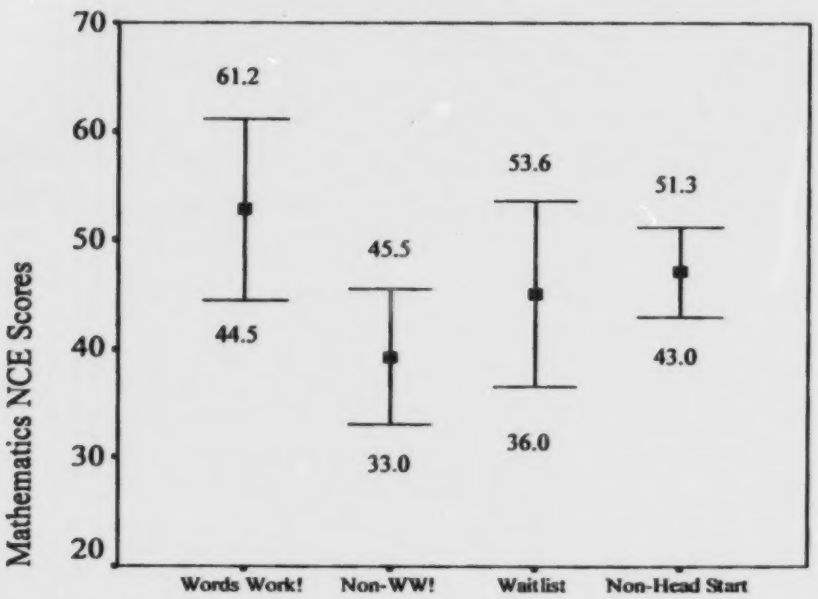
Small sample sizes in some groups – In an effort to adjust for small sample sizes, the statistical tests used in this study may be overly conservative (assuming a small sample from an infinite population). There are other statistical adjustments that could be made for finite (small) populations that would give us results at a much higher level of significance. However, the evaluation team decided to retain the current results to allow for more tentative conservative interpretations.

Missing test scores – As the longitudinal analyses progress over time, there will be larger numbers of children that cannot be located in St. Paul Public Schools. The impact of these children is likely to be small to start with, but will grow over time. The statistical precision of each group mean presented in this report takes into consideration the smaller sample size, recognizing that children with test scores represents a sample of the entire cohort that could have taken each test. Since we retain the same sample of children in the non-Head Start group, all groups have similar probabilities of losing children due to missing test days or moving away from the district.

Appendix A:
SAT10 2003 Confidence Intervals

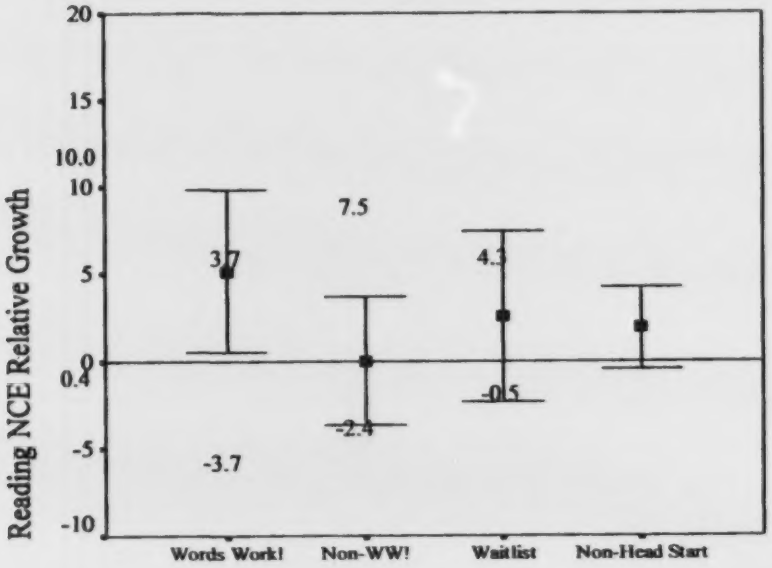
In cases where the confidence intervals did not overlap substantially, the evaluation team is 95 percent confident that the corresponding means are different because of group membership and not because of chance sampling. The choice in level of confidence is largely arbitrary, but in educational research 90-95% is acceptable for evaluating group differences, in an attempt to uncover meaningful differences based on potential useful interventions. Please note that the smaller confidence intervals are a product of the larger samples in the non-Head Start and Head Start groups.

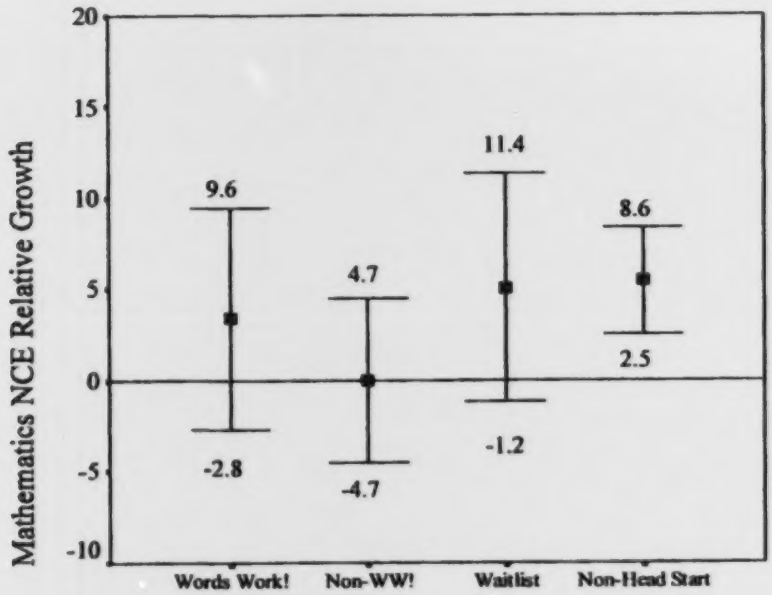




Appendix B:
SAT10 Growth Model Confidence Intervals

In cases where the confidence intervals did not overlap substantially, the evaluation team is 95 percent confident that the corresponding points are different because of group membership and not because of chance sampling. The choice in level of confidence is largely arbitrary, but in educational research 90-95% is acceptable for evaluating group differences, in an attempt to uncover meaningful differences based on potential useful interventions. Please note that the smaller confidence intervals are a product of the larger samples in the non-Head Start and Head Start groups.





August 26, 2003

About ACET

The Action Consulting and Evaluation Team (ACET, Inc.) is an independent research group specializing in the evaluation of PK-16 educational and community-based programs. Located in the Twin Cities, ACET contracts with a variety of professional consultants to work with clients in identifying program strengths and challenges, evaluating goal attainment, and providing recommendations for program improvement. The President of ACET is Stella SiWan Cheung.

Principal Investigator – Stella SiWan Cheung has consulted with a variety of organizations including the Minnesota Department of Children, Families & Learning, the North Central Regional Educational Laboratory, and the Minneapolis Foundation. Some of her current projects include serving as Principal Investigator for the University of Minnesota Morris New Teachers New Technology Program and the Cargill Foundation/University of Minnesota Schools First Initiative. The New York Times and several major U.S. newspapers and local radio and television programs have cited her research and commentaries. She has presented sessions on evaluation for the U.S. Department of Education, the University of Wisconsin at Madison, and the Minnesota Association of Charter Schools. Ms. Cheung was recently announced an Arizona State University College of Liberal Arts and Sciences Leader for being a distinguished graduate. She was also named a Princeton University Woodrow Wilson Fellow in 1996. She earned an M.A. in Policy Analysis and Program Evaluation at the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota.

Psychometrician – Michael C. Rodriguez is an Assistant Professor in the Department of Educational Psychology at the University of Minnesota. Dr. Rodriguez specializes in measurement and assessment, investigating issues related to construct equivalence of test items in various formats, classroom assessment practices, and assessment of achievement for students with moderate to severe impairments. He has worked extensively with schools and school districts to develop methods for improving their use of large-scale test information for planning and evaluation. He is currently conducting validity studies of several youth development program evaluation instruments. He holds a Ph.D. in Educational Measurement and Quantitative Methods from Michigan State University. Prior to obtaining his doctorate, he earned an M.A. in Public Affairs at the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota. Previously, he worked as a Research Associate with the Wilder Foundation Research Center, assisting in the development/management of social service and prevention program evaluations.

Database Support - Steve Culpepper is a graduate student in the Department of Educational Psychology at the University of Minnesota with an emphasis in research methodology. Steve currently assists with the statistical analysis of Words Work!, a longitudinal study examining the impact of early literacy programs for children enrolled in Headstart. Steve manages the longitudinal database and assists Professor Rodriguez with statistical analysis.

WORDS WORK!

THREE-YEAR EVALUATION REPORT
September 1999 – May 2002

Prepared by Mary Ellen Murphy
with the assistance of
Stella SiWan Cheung, Sandy Donovan, Vanessa McKendall, Chia Youyee Vang and Aloida Zaragoza

June 19, 2002

Funded through grants from

The F. R. Bigelow Foundation,
The Katherine B. Andersen Fund of the Saint Paul Foundation,
Mardag Foundation, The Saint Paul Foundation and an Anonymous Donor

LD 7511
.3 .F3
(3)

TABLE OF CONTENTS

Introduction	3
Executive Summary	6
Description of Participating Children	11
Project Impact	14
Critical Factors	34
Recommendations	36
Conclusion	37
Appendix	38

June 2002

Introduction

This report evaluates the Words Work! program, a $1.9 million partnership initiated by the F.R. Bigelow Foundation between the Saint Paul Foundation, Ramsey Action Program (RAP) Head Start and the Minnesota Literacy Council (MLC). The 2001-2002 school year was the third year of this multi-year initiative. Approximately 300 children were enrolled from fall to spring of each year in four Head Start sites.

This evaluation report has seven parts: the introduction, executive summary, description of participating children, project impact, critical factors, recommendations and conclusion. Since this is the third year of evaluation, the report format is slightly different than in previous two year-end reports. This year the report includes three-year analyses as well as findings specific to the third year of the program. The project impact section of the report is broken down in the following way: For each of four categories (Student Skills, Classroom / Instructional Techniques, Family Involvement, and Sustainability), an overall three-year summary is presented, followed by bulleted major findings for each of the program's three years, beginning with the first year. Case studies are used as sidebars to illustrate the evidence presented. Supporting tables and data summaries are included in the appendix.

Words Work! Goals and Strategies

Words Work! has two goals:

- Increase early literacy skills of children to prepare them to be successful readers and learners when they are in school; and
- Increase the family role in the development and delivery of high quality early literacy experiences for their children.

The specific goals for children include:

- Increase speaking and listening vocabulary;
- Increase phonological awareness;
- Develop print awareness;
- Attempt to print;
- Learn the letters of the alphabet; and
- Learn to count from one to 10 and understand the meaning of numerals.

The specific goals for families include:

- Increase literacy activities in family life;
- Help family members reinforce classroom goals through home visits;
- Achieve home environments conducive to the child's literacy development; and
- Increase quality parent-child interaction.

The strategies Words Work! uses to achieve these goals include:

- Develop curriculum support services and materials;
- Train classroom staff members;
- Provide equipment and materials to support an enhanced literacy environment; and
- Provide home literacy visitors to:
  - Identify specific parent needs;
  - Develop information, materials, services and other supports that parents need to provide enhanced early literacy experiences for their children;
  - Identify ways to share information about early literacy with parents; and
  - Develop information and materials to share with parents.

Methodology

This report is based on several sources of information collected from August 1999 to May 2002:

- Fall and spring student assessment data from three years;
- Case studies of eight children over three years;
- Three classroom observations from each of three years from each of the four Words Work! sites;
- Two staff focus group observations from each of the three years;
- Parent attendance reports and parent meeting notes from 1999-2000 and 2000-01;
- Fall and spring parent focus group findings from three years for all four sites;
- Pre- and post-program surveys of participants in the home visitor program from 2001-02; and
- Fall and spring home visitor focus groups from 2001-02.

The data were collected and analyzed by a multi-cultural and -lingual team of six evaluation consultants. The multi-cultural and -lingual team assured that parents, children and staff members could speak the language of their choice. This has meant that at least three languages were used for every parent focus group, fostering diverse participation. Trust more easily grew with direct communication, a critical condition for reliable and valid data collection. The team's cultural understanding also provided sensitivity and accuracy in analyzing and interpreting the data.

Children were assessed using the SPARK Skills Checklist (a tool produced by the authors of the classroom curriculum), a staff-developed writing assessment, a phonological assessment, an ABC assessment and the Boehm Test of Basic Concepts, a vocabulary test with national norms. The phonological assessment used was modified over the course of the program's three years to tailor it to the developmental needs of the children.

Many children relocated of left the program throughout the three years of the Words Work! program. Only those children who stayed in the program for a complete school year were included in that year's analysis. Student progress was measured using a conditional proportion formula to calculate the proportion of children at each center that had room to grow and did grow

from the fall of one year to the spring of that academic year (i.e. the percent of children eligible to grow in the fall minus the percent of children eligible to grow in the spring divided by fall eligibility).

A detailed summary of the data sources can be found in the appendix.

EXECUTIVE SUMMARY

WORDS WORK!
THREE-YEAR EVALUATION REPORT
September 1999 – May 2002

Prepared by Mary Ellen Murphy
with the assistance of
Sandy Donovan, Stella SiWan Cheung, Vanessa McKendall, Chia Youyee Vang and Aloida Zaragoza
June 19, 2002

Introduction

This report evaluates the Words Work! program, a $1.9 million partnership initiated by the F.R. Bigelow Foundation between the Saint Paul Foundation, Ramsey Action Program (RAP) Head Start and the Minnesota Literacy Council (MLC). The 2001-2002 school year was the third year of this multi-year initiative. Approximately 300 children were enrolled each year in four Head Start sites.

Words Work! has two goals:

- Increase early literacy skills of children to prepare them to be successful readers and learners when they are in school; and
- Increase the family role in the development and delivery of high quality early literacy experiences for their children.

This evaluation report provides presents third-year findings as well as three-year analysis of the program. It is based on a comparison of student assessment data, classroom observations, parent and staff focus groups, case studies, an analysis of parent meetings and feedback on the literacy home visitors program.

Project Impact

Student Skills

Words Work! successfully developed many of the desired literacy skills during each school year of the program's three years. At the end of each year, the overwhelming majority of students performed well on the SPARK assessments, knew how a book operated, meaningfully counted from one to 10 and attempted to write their name. In the third year, approximately 80-90 percent of the children mastered these literacy skills by the end of their school year as compared to 70-80 percent in the first year. The mastery of these skills indicates that each year the program was more effective in developing the literacy skills.

The Words Work! program was less successful in building children's phonological skills and conceptual vocabulary and in helping them to identify the ABCs than it was in improving their

SPARK, book operation, counting and name-writing skills. Children's phonological, conceptual vocabulary and ABC skills grew each year but the gains were minimal until the third year. In the Spring 2002, most children demonstrated statistically significantly improvements in their phonological skills and vocabulary, with two sites making tremendous strides.

In the second and third years of the program, Words Work! children exceeded the national Head Start goal of knowing more than 10 ABCs. The average number of ABCs that Words Work! children knew in those years was 13 and 14 respectively. Although these averages exceed the national goal, it still fell short of the program goal of 50 percent of the children going to kindergarten in the fall knowing all 26 ABCs. In the program's respective years, only 9 percent, 13 percent and 25 percent of the prospective kindergarten children knew all 26 ABCs.

The rate of literacy growth expanded as the program developed, particularly for children of color, with accelerated growth in the third year. In the first year, growth was center- and classroom-based. Growth in the second year was higher than the first year but remained sporadic, still differing by classroom and center. In the third year, growth was high across centers except for conceptual vocabulary and rhyming. As noted above, one center and one classroom in particular effectively taught their children the vocabulary as measured by the Boehm and rhyming.

Classroom / Instructional Techniques

The improvement of children's literacy skills is a reflection of the changing instructional techniques of teachers as they continue to increase their understanding of the Spark curriculum and their ability to modify it to meet student needs. The program has made tremendous strides in developing teachers' instructional capacities. Over the three years, teachers mastered techniques that effectively teach children literacy skills. In addition, as teachers became proficient in their techniques, they also became more effective in embedding them in the classroom's natural learning flow. Teachers more often enthusiastically seize teachable moments and praise children's progress. Most have developed strong leadership skills among their peers and continue to improve their ability to use evaluation data to modify their instruction. They are beginning to share effective teaching strategies across sites and among classrooms as they develop a professional learning community.

The most dramatic change was in the teachers' attitudes about their role. Originally many saw their job as plagued with difficulties brought by the children, but over the next three years teachers' attitudes shifted. They began to see themselves as having the ability to influence learning and the program gave them additional tools to use. Their "tool box" of instructional practices and techniques expanded over time, increasing the teacher's comfort with their role. They moved from blaming children and families to demonstrating leadership by looking for more and new ways to help children learn. Teachers became intentional in their practices. Classroom routines were established that reinforced literacy development. Teachers quickly realized that the routines reinforced literacy skills in children. The link between classroom practices and instructional techniques to children learning was formalized. Teachers challenged themselves and their mentors with finding additional ways to help children learn. Transitions to various classroom activities became opportunities to reinforce learning.

Family Involvement

The program successfully increased parents' involvement in their children's education and family support for literacy development. Family involvement has increased, particularly in the area of at-home involvement. Parents reported that they have been using the teachers' and home visitors' suggestions to support their children's literacy activities. For three years the Book-in-a-Bag program continued to be parents' most used and favorite school project. For many families it provided the only children's book in their home. A regular place for children's schoolwork has been established in most homes. Parents regularly asked their children about schoolwork and reading with the child has increased considerably. While the home environment still lacks many of the resources (such as children's books, games, blocks, and writing materials) parents began using home materials they do have for teaching their children. Parents attending the focus groups continued to request more activities they can do with their children to support their learning.

As children came home proudly demonstrating what they learned and communication from teachers increased, parents became increasingly aware of their child's progress. The information was well received by the parents. The more parents knew the more they wanted to know. In the third year, parents in some sites asked for written comments from teachers once a week. The newsletters were effective ways the school communicated about classroom activities, themes and activities families could complete to support their child's classroom work. Telephone calls, verbal reminders when parents picked up their children and bus driver comments were the most effective ways the program used to let parents know about upcoming events requiring their attendance or participation. Monthly parent meetings changed from the first and second year when committee reports were tediously translated into two or three languages, to the third year when meetings consisted of demonstrations and parent activities mimicking children's activities. This change also helped to keep parents well informed. Parents also appreciated increased contact with their child's teacher at the monthly parent meetings.

Parents with a few exceptions were overwhelmingly pleased with their child's Head Start experience and development of literacy skills. For parents with limited English abilities, bilingual staff members helped them feel welcome and informed. However, family involvement is the least developed part of the program and remains the greatest challenge. Family involvement, like effective teaching practices, varied across classrooms. Some teachers are adept at communicating with parents and involving families in creative ways. In those classrooms, family pictures grace the walls. Family cultural symbols are used as learning opportunities. Parents were warmly welcomed and meaningful activities were found for them to do in the classroom. Other classrooms minimally involved parents.

Sustainability

One of the Words Work! goals was that the program would be sustained by the collaborating agencies after the foundation funding ended. Words Work! has made sizable gains in ensuring sustainability but sustainability is still questionable. Several factors contribute to the program's continuance at Head Start, including the program's staff members' strong commitment to

developing children's literacy and their knowledge of effective instructional techniques. Many of the program's teaching strategies and classroom materials have become part of the non-Words Work! classrooms. Recent interviews suggested that competition between program teachers and non-Words Work staff members has been reduced and non-Words Work staff members seem anxious to learn about the program and replicate the effective teaching strategies. MLC staff members have warmly welcomed the program's home visitors and continued to link the program staff with adult literacy resources.

In spite of the program's grounding in staff members' skills, enthusiasm and commitment, the challenges are formidable. Head Start's structure, personnel policies, leadership and communication continue to interfere with successful program outcomes and institutionalizing Words Work!. The lack of an effective system of accountability is foremost. The inequity among classrooms and centers lessened with training and strong support but were not eliminated. A low pay scale and a lack of time for teachers to reflect, plan and modify instruction also remain barriers. A lack of communication among centers, agency divisions and management prevented all staff members from understanding the program, its impact and relationship to their job. A lack of leadership and charges of institutional racism have created a strained atmosphere of tension and uncertainty.

The integration of the program into the MLC structure is also challenging. The home visitor program is a new venture for MLC. Pre-school children and their families are new target groups. MLC continues to question the fit of the Words Work! program with the agency's focus on adult and school-age children's literacy.

Critical Factors

Several key factors affected the program's ability to achieve its desired goals, including:

- Instructional practices;
- Staff development and support; and
- Institutional practices.

Recommendations

The Words Work! program has been particularly adept at addressing recommendations included in each year's evaluation report. Program leadership and center staff members have been quick to solve problems and find creative solutions. Unfortunately some challenges still remain. The recommendations below are offered to improve children's literacy development, instructional practice, family involvement and replicate and sustain the program beyond foundation funding. Specific suggestions include:

- Continue and enhance the same pattern of staff development that includes training, direct feedback, mentoring, videotaping, reflection and sharing of best practices;

- Clarify teacher expectations of performance and develop a system of accountability to ensure quality performance of all teachers, in particular, target areas for improvement with follow-up;
- Increase teacher understanding of phonics and its relationship to literacy and reading and continue to develop and share effective teaching strategies for phonological skills, particularly rhyming, vocabulary and ABCs;
- Set program standards that outline pre-school literacy skills for children's success in kindergarten;
- Improve the discipline policies and system, using classroom teacher ideas, to reduce the classroom disruption due to children with severe behavior problems;
- Increase coordination among the home visitor, classroom teachers and family advocates;
- Continue to develop unique strategies to involve families of varying cultures, including increased communication in the home language and culturally-appropriate materials;
- Ensure bilingual teachers with the same languages as the children;
- Investigate the relationship between family literacy practices and children's literacy development;
- Replicate best practices and continue to train staff members in non-Words Work! sites;
- Involve teachers in enrollment decisions; and
- Develop a strategy to inform and involve new Head Start leaders in developing policies and procedures that support the program's sustainability and children's literacy development.

Conclusion

The Words Work! program has progressed toward achieving its outcomes over the past three years. In particular, the program has successfully helped pre-school children master many literacy skills, including knowledge of a book's operation, meaningful counting, ability to write their name and vocabulary including colors, opposites and many other language skills. While growth in phonological skills, conceptual vocabulary and ABCs was not as great as other literacy skills, the growth was sizable and statistically significant. In addition, the growth for children of color accelerated and reversed the two-year trend of parallel progress. The long-standing achievement gap between children of color and white children began to close this year.

The accelerated growth and mastery is due to the effective instructional practices of program teachers and a literacy-dominated curriculum. Teachers continue to develop new and creative ways to teacher children literacy skills. Unfortunately, teaching abilities vary from classroom to classroom and are reflected in differences in children's mastery of literacy skills.

Family involvement also grew over the three years. The first year of the home-visiting component of the program completed this year, resulting in increased family involvement and support of their child's literacy development. Home reading increased, the home learning environment of participating families became more conducive to literacy development and parents' knowledge of classroom activities increased. Family enthusiasm for the program continued to grow, with families often in focus groups offering few suggestions.

Challenges remain. Significant institutional barriers continue to interfere with children's literacy development, family involvement and the sustainability of the program. These barriers must be addressed. The program must continue to be strengthened in the existing centers, particularly in areas of phonological skill, conceptual vocabulary, ABCs and family involvement. At the same, incremental replication of Words Work! into non-program sites should continue.

DESCRIPTION OF PARTICIPATING CHILDREN

The children described in this report are those who were continuously enrolled from fall to spring. Their numbers ranged from a high of 351 students the second year to a low of 281 students the third year. The following student demographics show how diverse the population is by many different criteria. Children differ in ways such as their race and ethnicity, age, English-speaking ability, and whether or not they have special needs. In addition, these demographics also shifted during each year of the program, reflecting the changing student body at the four sites of Baker, Bigelow, McDonough and St. Clair.

Student testing mobility: Student testing mobility is measured by how many of the children took the same skills test in the fall and spring of the academic year. Overall, there was a high degree of stability at all four sites during all three years. In 2001-02, St. Clair had the highest level of stability with 94 percent of children taking the same test both times in the year. Baker had 81 percent of its children taking the same tests, and both Bigelow and McDonough had stability levels of 79 percent.

Race / Ethnicity: The following chart shows the race and ethnicity of the Words Work! children over the three years of the program. Each year a majority of the children was children of color (92 percent the first year, 88 percent the second year and 92 percent the third year). Overall, the number of Hispanic children nearly doubled during the program's three years. The number of Hmong or Asian children declined from 41 percent of all children the first year to 31 percent the third year. The number and percent of African children (mostly Somali) also increased over the three years, although due to record keeping methods, the data does not fully reflect this (during the third year, Head Start began counting African children as African-American, thus inflating the number of African-American children and deflating the number of African children). From their own observations and other evidence, evaluators are confident that in fact the number of African children increased over the three years while the number of African-American children decreased.

Race / Ethnicity	1999-2000	2000-01	2001-02	Total
African	27 (8%)	37 (10%)	2 (1%)*	66 (7%)
African-American	98 (30%)	102 (29%)	92 (33%)*	292 (30%)
American Indian	2 (1%)	2 (1%)	4 (1%)	8 (1%)
Caucasian	26 (8%)	43 (12%)	21 (8%)	90 (9%)
Hispanic	37 (11%)	59 (17%)	68 (24%)	164 (17%)
Hmong / Asian	133 (41%)	108 (31%)	87 (31%)	328 (35%)
Other / Missing	4 (1%)	0	7 (2%)	11 (1%)
Total	327	351	281	959

* During the program's third year, Head Start began counting African children as African-American.

The largest racial/ethnic group at each site for the school year 2001-02 is listed below:

- *Baker*: Hispanic (63 percent), after an increase each of the previous two years;
- *Bigelow:* African and African American (56 percent);

- *McDonough:* Asian and Hmong (63 percent); and
- *St. Clair*: Hispanic (40 percent), after a slight increase each of the two previous years.

Age: The age breakdown of Words Work! children remained relatively stable over the program's three years. Each year, fewer than 10 percent of the children were 3-year-olds. The remaining children were relatively evenly split between 4-year-olds and 5-year-olds all three years. The first year, the largest group (50 percent) was 4-year-olds, the second year the largest group (49 percent) was 5-year-olds and the third there were about the same number of 4-year-olds and 5-year-olds.

Age	1999-2000	2000-01	2001-02	Total
3-year-olds	22 (7%)	33 (9%)	25 (9%)	80 (8%)
4-year-olds	163 (50%)	148 (42%)	129 (46%)	440 (46%)
5-year-olds	142 (43%)	170 (49%)	127 (45%)	439 (46%)
Total	327	351	281	959

Gender: Males and females were closely balanced over the program's three years. The biggest contrast between genders was in the third year, when about 53 percent of children were female and 46 percent were male.

Gender	1999-2000	2000-01	2001-02	Total
Female	165 (50.5%)	171 (48.7%)	149 (53%)	485 (51%)
Male	162 (49.5%)	180 (51.3%)	128 (45.6%)	470 (49%)
Missing	0	0	4 (1.4%)	4
Total	327	351	281	959

English-speaking Ability: About half of the children were considered fluent English-speakers, but the levels of fluency varied somewhat during the program's three years. The percent of fluent children dropped from 51 to 46 percent while the percent of children who were "somewhat fluent" increased from 9 to 17 percent. The percent of children who had no English also dropped over the three years, from 20 to 14 percent.

English Skills	1999-2000	2000-01	2001-02	Total
No English	64 (20%)	59 (17%)	39 (14%)	162 (17%)
Little English	67 (20%)	82 (23%)	59 (21%)	208 (22%)
Somewhat Fluent	29 (9%)	27 (8%)	47 (17%)	103 (11%)
Fluent in English	167 (51%)	183 (52%)	129 (46%)	479 (50%)
Missing	0	0	7 (2%)	7 (1%)
Total	327	351	281	959

Enrollment Status: About three-fourths (74 percent) of all Words Work! children were new to the program in 2001-02. At St. Clair, only 60 percent of the students were new, at McDonough 67 percent were new, at Baker 76 percent were new, and Bigelow had a new-student rate of 83 percent.

Disability status: About 16 percent of all Words Work! children had special needs in 2001-02. This was a decrease from the previous year, when more than 20 percent had special needs. Bigelow had the highest percent of special needs children (20 percent, down from 27 percent the previous year). At St. Clair, 19 percent of children were special needs, 13 percent at McDonough and 9 percent at Baker.

PROJECT IMPACT

Student Skills

Words Work! successfully developed many of the desired literacy skills during each school year of the program's three years. At the end of each year, the overwhelming majority of students performed well on the SPARK assessments, knew how a book operated, meaningfully counted from one to 10 and attempted to write their name. In the third year, approximately 80-90 percent of the children mastered these literacy skills by the end of their school year as compared to 70-80 percent in the first year. The mastery of these skills indicates that each year the program was more effective in developing the literacy skills. Interestingly, children's literacy skills in the second and third years of the program were greater when they entered Words Work! than those of the first-year children. Improvements in and standardization of the assessment process are the likely causes of the difference. Case studies illustrate this mastery of skills:

> *Youa is the fourth of six children. The mother does not work outside of the home. The father works at a company where he is an assembler. They have been in the U.S. for 12 years. Youa's mother said that enrolling her daughter at Head Start was important in preparing her for kindergarten. She has seen significant changes in her child. She stated that her child knew very little English before going to Head Start. Toward the middle to the end of the school year, the child could speak English with her older siblings. The mother credited her child's ability to count and print her name to Head Start. She said, "Her dad and I didn't teach her any of this. She knew how to count in Hmong from 1-10, but she did not know how to say it in English. It seems that she would learn certain things in school, and then older siblings would help her at home. Sometimes the kids would tell each other the stories that they were learning at school. [Youa] tells her older siblings her stories from Head Start."*

The Words Work! program was less successful in building children's phonological skills and conceptual vocabulary and in helping them to identify the ABCs than it was in improving their SPARK, book operation, counting and name-writing skills. Children's phonological, conceptual vocabulary and ABC skills grew each year but the gains were minimal until the third year. In the Spring 2002, most children demonstrated statistically significantly improvements in their phonological skills and vocabulary, with two sites making tremendous strides. In one particular classroom of three- four- and five-year olds, the mean score on the rhyming assessment was four times higher than the mean in the site's other three classrooms. One site also taught children conceptual vocabulary words, such as under, above, and in front of so that their scores on the nationally-normed test began to compare favorably with their national preschool peers.

In the second and third years of the program, Words Work! children exceeded the national Head Start goal of knowing more than 10 ABCs. The average number of ABCs that Words Work! children knew in those years was 13 and 14 respectively. Although these averages exceed the national goal, it still fell short of the program goal of 50 percent of the children going to kindergarten in the fall knowing all 26 ABCs. In the program's respective years, only 9 percent, 13 percent and 25 percent of the prospective kindergarten children knew all 26 ABCs.

The rate of literacy growth expanded as the program developed, particularly for children of color, with accelerated growth in the third year. In the first year, growth was center- and classroom-based. Growth in the second year was higher than the first year but remained sporadic, still differing by classroom and center. In the third year, growth was high across centers except for conceptual vocabulary and rhyming. As noted above, one center and one classroom in particular effectively taught their children the vocabulary as measured by the Boehm and rhyming.

The Words Work! pogrom also made significant progress toward the goal of preparing students for kindergarten. Case studies indicate that many children who had been in the Words Work! program were prepared for the demands of first grade:

> *Neng is attending HOPE Academy charter school for the 2001-02 academic year. She is in first grade. As the youngest child, she receives help from her older siblings. Her father works first shift while her mother works the second shift. Neng's mother said that she had seen great improvement in her daughter's ability to speak English. She gives her teacher a lot of credit and expresses concerns for her own lack of time to be with her children. She stated, "We barely have time to eat together once or twice during the entire week. There is no time in our life for activities, especially during the cold season." When asked to recite the letters of the alphabet, the child could do so. The evaluator wrote the letters of the alphabet and asked the child to read the letters out of order. The child was able to recognize all letters of the alphabet. The mother credited her husband in addition to the older siblings and her teacher for this progress. When asked what she liked most at school, she said that she liked singing songs and coloring. In the spring 2002 interview, the child could sound out several words, such as "she," "he," and "go."*

> *Jenny's family has lived in St. Paul for eight years. There are three children in the family and she is the youngest. Her mother's educational background is one year of college. Her occupation is housewife/child care. The family has moved away before the end of the school year, thus the child will no longer be participating in the project. Jenny's mother indicated that she enrolled her daughter in Head Start to help prepare her for kindergarten. She stated, "So she can be around other children. Be in a more learning environment and be ready for kindergarten." The mother knew her child's Head Start teacher by name and had met with her. Throughout the school year, she used materials provided by Head Start to help her child learn, such as SPARK stories, newsletters, and sheets. When she had questions, she would contact the Head Start center manager. She did, however, express some concern about the center manager needing to be more available. What the mother valued most about her child being at Head Start is "that she loves being there. She's sad when not there." Additionally, Head Start is "preparing her for the next grade, interacting with others..."*

This was Rosita's first year in kindergarten. This year she continues to be sociable, inquisitive and very much a communicator. She is more able to express her feelings and is also more patient and focused in her attention. Her listening and reading skills have also developed more. Her mother reports that she has performed very well in school and has benefited from being in a bilingual classroom. Her Spanish is clearly stronger than before although she had previously been exceptionally bilingual. She has learned more about her two cultures and is a proud Latina. Her teacher has helped her to learn to be calmer and to improve her behavior. The child is also very proud of her progress and excitedly shared the many things she does well at school: reading, drawing and coloring inside the lines, "cutting very well"/ "cotando muy bien." Without prompting, she offered to read to the evaluator at the last interview. She read from own book and sounded out letters when she needed to in Spanish. In summary, it appears that this child has been prepared well for learning through her Head Start experience. It nurtured her love for books and learning and also provided the focus she needed, giving her a solid foundation for future learning. The fact that she is in a bilingual kindergarten classroom is an added value to maximize her learning in two languages. In her own words, Rosita excitedly told the evaluator, "The class can be interesting and I can do things very well."

Debbie is one of five children and lives in a two-parent household, where she is the youngest. Her mother is a housewife and does eldercare on a part-time basis. The mother is a 31 year-old white woman who has lived in St. Paul her entire life. Her educational background is completion of 11th grade. Debbie finished first grade in spring 2001. Her mother reports that she is doing very well. She remains sociable and has many friends. She is physically large for her age, which her mother feels brings its own challenges. She likes to be heard and express her opinions. She can now count past 100 and likes numbers. She enjoys reading and reads everyday. She reads labels, the cartoons in the paper, large print books and books from school and the library. In the car, she writes letters and now enjoys using her computer skills. But, some reading is difficult for her and her mother feels she should be reading at a higher level.

Annual Findings
1999-2000 (First Year)

Strengths:

- SPARK assessments: At least 75 percent of Words Work! children mastered 23 of the 37 SPARK literacy skill areas the first year. Growth in these skills was greatest in recognizing names in print, counting, and singing.
- Book awareness: An overwhelming majority of Words Work! students knew how a book operated at the end of this year. The average year-end score for understanding a book's operation was 6.2, out of possible scores ranging from zero to seven.

- Attempts to print: The program demonstrated great success getting children to print. All but one Words Work! child attempted to print this year.

Challenges:

- Phonological awareness: Although children made significant gains in four areas of the phonological assessments, assessment results were generally low in this area. Their greatest success was in identifying single syllable words and hearing sounds, while rhyming was their greatest challenge.
- Vocabulary: Words Work! children struggled to perform as well on vocabulary assessments as their peers around the country. In the program's first year, 62 percent of Words Work! children scored in the bottom quartile on the Boehm assessment. Nine percent scored in the top quartile.
- ABCs: The Words Work program fell short of its goal of 50 percent of children entering kindergarten knowing all 26 letters of the alphabet. In the program's first year, 9 percent of students going to kindergarten knew all 26 letters.

2000-01 (Second Year)

Strengths:

- SPARK assessments: At least 75 percent of Words Work! children mastered 30 of the 37 SPARK literacy skill areas this year. Growth in SPARK assessments was greatest in certain activities, including recognizing names in print and pointing to certain colors.
- Book awareness: The average year-end score for understanding a book's operation was 6.1, out of possible scores from zero to seven.
- Attempt to print: Words Work! made great progress in helping children print. Children scored an average of 4.75 on a one- to six-point scale.

Challenges:

- Phonological awareness: While Words Work! children on average made statistically significant progress from fall 2000 to spring 2001 in at least four of the six areas of the Phonological Assessment, they continued to struggle with these skills. Children had their greatest success in identifying individual words and hearing sounds; they had the least success with rhyming.
- Vocabulary: While Words Work! children had more success on vocabulary assessment tests this year than the previous year, they still struggled. Thirty-three percent of Words Work! children scored in the bottom quartile on the Boehm assessment test, while 16 percent scored in the top quartile.
- ABCs: For the second year the project fell short of its goal: In spring 2001, 13 percent of children going to kindergarten knew all 26.

2001-02 (Third Year)

Strengths:

- SPARK assessments: At least 75 percent of Words Work! children mastered 34 of the 41 SPARK literacy skill areas this year. Growth was greatest in the areas of recognizing names in print, naming more than four body parts, and naming a circle.
- Book awareness: Words Work! children continued to display proficiency in book operation. The average year-end score for understanding a book's operation was 6.1, out of possible scores from zero to seven.
- Attempt to print: Most Words Work! children had attempted to print by the end of this year. Average scores at three centers ranged from 5.6 to 4.6 on a one- to six-point scale. [One center began using a different scale for this assessment and thus its scores could not be included in a composite.]
- Phonological: Overall, Words Work! children made statistically significant progress from Fall 2001 to Spring 2002 in all three areas of the phonological assessment. Although children did make significant gains in this area, overall success was still relatively low. Children had their greatest success in identifying syllables, and they continued to have the least success in rhyming.

Challenges:

- Vocabulary: Children this year struggled more than children in the program's second year on the vocabulary assessment. Forty-two percent of Words Work! children scored in the bottom quartile on the Boehm test, while 15 percent scored in the top quartile.
- ABCs: For the third straight year, the program fell short of its goal of 50 percent of children entering kindergarten knowing all 36 letters. Nevertheless, the percent of children who did know all 26 letters jumped to 25 percent in Spring 2002.

Classroom / Instructional Techniques

The improvement of children's literacy skills is a reflection of the changing instructional techniques of teachers as they continue to increase their understanding of the Spark curriculum and their ability to modify it to meet student needs. The program has made tremendous strides in developing teachers' instructional capacities. Over the three years, teachers mastered techniques that effectively teach children literacy skills. In addition, as teachers became proficient in their techniques, they also became more effective in embedding them in the classroom's natural learning flow. Teachers more often enthusiastically seize teachable moments and praise children's progress. Most have developed strong leadership skills among their peers and continue to improve their ability to use evaluation data to modify their instruction. They are beginning to share effective teaching strategies across sites and among classrooms as they develop a professional learning community.

The process of learning new teaching techniques, using them to teach literacy skills and then modifying them based on student progress has become a regular process for most teachers. For example, all centers and several individual teachers set literacy goals at the beginning of the third year that reflected their unique challenges. When goals were not met, they quickly strategized and experimented with new techniques. Brainstorming and problem-solving were common among many staff members and teachers sought additional support and resources from Head Start to improve their outcomes.

Teachers experienced professional development as a part of the Word Work training and follow-along support, and many teachers also continued their professional growth outside of the centers. Several teachers completed their degree programs. In one center, three of the teachers received associate degrees and all plan to pursue bachelor degrees. One teacher graduating with a master's degree in education used Words Work! as her dissertation topic. Teachers are enhancing their learning both in and out of the classroom.

This profile of teachers as professional learners contrasts sharply with teacher attitudes during the program's first year. For example, at the opening training sessions, teachers described evaluation as being like "going to the dentist" and "burdensome." Most teachers feared the evaluator's classroom observations. The feedback sessions with staff where evaluators shared the results of observations, focus groups and assessments were primarily filled with complaints about what did not work in the program. Most felt overwhelmed, and questioned and doubted the program expectations for children, suggesting that they too high. Many teachers raised the same questions about the appropriateness of teaching literacy to preschool children that are often reflected in the pre-school literature. Teachers feared that program goals would not be achieved and many staff members were generally defensive. While some teachers supported the program's goals early on, most viewed the program as something being "done to them." Teachers noted that most had not been part of the planning and that the assessments were time consuming, constituting a seemingly overwhelming burden when teachers were already pressed for time.

The center managers also became more professional. In the first year, the center manger's primary role was administrative, monitoring compliance with federal regulations and completing paperwork with little time for educational leadership. In two centers the center manger also taught, making it extremely difficult for parents to contact the center or teachers and leaving minimal time for educational coaching. In the third year, two center mangers became mentor teachers, freeing them of their classroom duties to concentrate on training and supporting the classroom teachers. They suggested ideas to teachers as they observed their classrooms, problem-solved when goals fell short, identified areas for additional work and advocated for their staff members to the program director and at managerial meetings. Teachers' attitudes toward the mentors switched from seeing them as an extra person to help with children to a resource for improving their teaching, a source of fresh ideas, a source of encouragement and classroom materials. The center manger and mentor teacher became additional resources in the learning community, focused on the needs of the children and program goals.

For many teachers, evaluators were seen as peers and a resource for reflection and learning. Teachers went from complaining about not understanding the children's assessment data reports and requesting only bar charts, to in several cases asking for detailed classroom data. In addition to improving assessment and reporting techniques, evaluators worked as partners with teachers to increase their ability to use data. This year, one center asked to put their children's data into the computers themselves, simplifying record keeping but also allowing them to more quickly access student progress.

The most dramatic change was in the teachers' attitudes about their role. Originally they felt responsible for the positive development of children but many saw their job as plagued with difficulties brought by the children. Many children spoke little or no English, were recent immigrants and unfamiliar with American educational practices and cultural ways, were poor and lacked the resources in their homes to support learning and positive children's development. Family problems brought some children to school with high emotional needs that often resulted in classroom disruptions. The children, their families and home environments were described as "the problem" for children not learning, and seen by teachers as barriers they could not overcome.

Over the next three years teachers' attitudes shifted. They began to see themselves as having the ability to influence learning and the program gave them additional tools to use. Their "tool box" of instructional practices and techniques expanded over time, increasing the teacher's comfort with their role. They moved from blaming children and families to demonstrating leadership by looking for more and new ways to help children learn. Teachers became intentional in their practices. Classroom routines were established that reinforced literacy development. Teachers quickly realized that the routines reinforced literacy skills in children. The link between classroom practices and instructional techniques to children learning was formalized. Teachers challenged themselves and their mentors with finding additional ways to help children learn. Transitions to various classroom activities became opportunities to reinforce learning. For example, children began their day "signing-in" to their classroom. Children sat on shapes on the floor and lined up in alphabetical order. Rhymes were recited before going out to recess. Peas and carrots were counted during lunch. Songs about numbers and ABCs were sung on the way to the bathroom. Literacy skills were consistently integrated into activities throughout the Head

Start half-day. Teachers actualized their role of creating an environment and activities that stimulated children's learning and positive development. What had been problems caused by others became opportunities for professional developed and increased student success.

While changes in teacher attitudes helped teachers develop their intentionality, they also increased their skill with the SPARK curriculum. As teachers became familiar with the curriculum and modified it, they became more comfortable and natural in the classroom. At the end of the first year, teachers complained about how some of the stories in the SPARK curriculum were inappropriate for their children. They continued to use these activities even though children were disengaged. In the second year they modified the ineffective activities and added their own. As their knowledge of the curriculum grew so did their ability to modify the curriculum and create more effective practices. With more of the curriculum known and understood, teachers deviated from the standard and seized the teachable moments to respond to student characteristics and progress. Although only 40 percent of the original teaching staff remained at the beginning of the third year, even the new teachers adapted the curriculum quickly to address their children's needs. Learning became part of the climate at the centers and mature and experienced teachers provided support for the new teachers with effective models and proven teaching activities and techniques. In addition, teachers' knowledge of the stages of literacy development grew. In the third year, "the road to literacy development" that described children's literacy developmental levels helped teachers create activities that developed a particular stage. The sequencing was established that allowed the teachers to provide the appropriate activity. Since little of the knowledge base had been previously developed, the teachers developed a knowledge through their experiences and tracking of student progress. They began to see the developmental stages and levels in their children and could identify new stages that had to be taught. The added knowledge enhanced their teaching ability/effectiveness.

The children's cultures and languages have shifted from being strictly a barrier to learning to becoming an opportunity for learning. In three centers, all children learned to count and greet each other in all of the children's languages, expanding their language base. Teachers encouraged children to talk with one another even if it was not in the same language. Language became the centerpiece of the classroom. Parents of English-speaking children asked teachers for Spanish and Hmong words so that they could encourage the multiple language development at home. In contrast to early observations of English-speaking teachers turning away when a child spoke to them in their home language or sending them to someone who spoke their language, teachers in two centers expanded their own ability to speak the children's language. Teachers at the center with many Spanish-speaking children proudly proclaimed at the end of the year that almost all could understand Spanish. Teachers at another site learned to speak Hmong. They explained and evaluators observed that when teachers spoke to children in their home language children smiled. Children's engagement in the classroom grew. Parents were pleasantly caught off guard when they heard the teacher speaking Hmong to the children. In addition, the role of the bilingual teacher changed. The Hmong-speaking teachers' role changed from one of a full-time translator constantly speaking Hmong to that of a classroom teacher and a bilingual resource only when the child needed the resource. Children who had some English ability were expected to speak English when speaking to the bilingual teacher. The rich language-based classrooms were noted by one special education teacher to be the result of

limited or non English-speaking children beginning to speak early in the year rather than at year end as in previous years. Case studies also illustrate parental satisfaction with bilingual teachers:

> *When she has concerns, Lupe's mother speaks directly with her child's teacher. Having a bilingual teacher is helpful to her. She also appreciated that the librarian speaks Spanish. What the mother valued most about her child attending Head Start is that the teacher is very good and helps her daughter a lot. She said that her "child demands a lot of patience and teacher and teachers have more patience than mothers. Teachers can get children to do things better than mothers." The mother credited her child's teacher for helping to improve her child's attitude and behavior. She is very satisfied with her child's progress and feels that Lupe is well prepared.*

The program had numerous examples of how teachers integrated the children's cultures into their classrooms by the end of the third year. Children's cultures became part of the classroom, beginning with a few multicultural books and toys and expanding to the children's home language being spoken by teachers and children, words in the all children's languages labeling the classroom and family pictures on bulletin boards. Teachers grew in their ability to respond to varied cultural practices When Somali parents in the second and third years complained about classroom practices that did not respect their culture, teachers were defensive. In the third year, the defensiveness changed to problem-solving and finding resources to support Somali cultural practices. Dialogues began between Somali parents and teachers to learn about the Somali culture and the Head Start program and educational practices. The process of teachers and parents learning from one another has the potential be used for other immigrant groups as they arrive and become part of the Head Start community.

While most teachers seized the program as an opportunity to expand their teaching skills, a few were stymied and stuck. Quality of teaching across classrooms was inconsistent. A few teachers, in spite of additional training and coaching, did not demonstrate the skills necessary to help their multicultural, multilingual children develop literacy skills. Literacy growth rates lagged in their classrooms. In addition, a few teachers demonstrated attitudes and behaviors that were not conducive for learning. For example, at least two were observed making ethnically biased statement about the children they teach. The greatest inequity of the program was the vast range in teaching abilities. Some children were taught by outstandingly effective teachers and others received less competent instruction, thus jeopardizing those children's preparation for kindergarten and thirst for learning.

Annual Findings
1999-2000 (First Year)

Strengths:

- Specific instructional techniques: Repetition, dialogic reading, and connecting SPARK themes to auxiliary activities supported literacy development.
- Print-rich environment: Throughout this first year, classrooms became more "print-rich." Labels, books, and writing activities were added to most classrooms.

- Multi-sensory, hands-on activities: Teachers early on seemed very adept at building these activities into their day and coordinating them with SPARKS activities.
- Teacher flexibility: As teachers became more familiar with the Words Work! program and SPARK activities, they became adept at modifying activities to best serve their students.

Challenges:

- Teachers' varying abilities: While most teachers excelled at finding ways to support children's literacy development, there were varying levels of proficiency. For instance, evaluators noted that a teacher's deliberate connection to literacy seemed to make the largest impact on the children, but they also noted that some teachers were more adept at making these connections than others.
- Multi-cultural and -lingual activities and materials: Although evaluators noted an increased presence of multi-cultural books, toys and activities by the end of this first year, they also noted that these materials often remained scarce, especially in recent-immigrant languages like Hmong and Spanish. Parents at spring focus groups also asked for more materials in their home languages.
- Access to computers: With one computer in each classroom, children were observed standing in line to wait for computer time.

2000-01 (Second Year)

Strengths:

- Age-specific classrooms: Three sites hosted 3- and 5-year-old classrooms, which seemed to allow teachers to concentrate more on specific children's needs.
- Print-rich environment: In addition to labels, books, and writing activities, most teachers this year began having children "sign-in," either by finding their names on cards or printing their names themselves.
- Multi-sensory, hands-on activities: Teachers continued to develop and use creative multi-sensory instructional practices.
- Teacher flexibility: Instruction continued to move from "one approach works well for all" to meeting individual student's developmental needs.
- Staff professionalism: Teachers and aids were increasingly able to create appropriate instruction and to use meeting time to plan and reflect purposefully. Teachers' attitudes generally switched from defensiveness to problem solving.

Challenges:

- Teachers' varying abilities: While observers reported that teachers made gains in areas such as intentionally connecting instruction to literacy and engaging the children, teachers continued to display varying abilities to translate classroom materials and situations into learning opportunities for children.
- Lack of bilingual staff: Although bilingual staff were present in most classrooms, some participants in parent focus groups reported dissatisfaction with a lack of bilingual staff in their children's classroom.
- Computer access: As the computer continued to be a popular learning tool, one computer per classroom continued to present a challenge, with children waiting in lines.

2001-02 (Third Year)

Strengths:

- Intentional practices: Teachers were consistently reported to be intentionally introducing literacy to the classroom environment.
- Integrating SPARK concepts: Teachers were noted to have become much more comfortable integrating these concepts into their days by the third year of the program
- Teacher flexibility: Teachers continued to find "teachable moments" and determine how to use a variety of strategies to meet individual children's needs.
- Teacher professionalism, development of teaching strategies: Teachers were observed having moved away from attitudes of "How are we going to fit this in?" and "These children can't do this," to being able to take advantage of every teaching opportunity.
- Print-rich environment: Classrooms continues to evolve as writing and print-rich centers of learning.
- Multi-sensory, hands-on activities: Teachers continued to develop and use creative multi-sensory instructional practices.
- Bilingual staff: At several centers, staff were observed speaking children's home language, even if the teachers were not very familiar with the language.

Challenges:

- Computers: Many parents continue to comment that they would like additional computers in their children's classrooms.
- Teachers' varying abilities: Some teachers are still reportedly not performing at an acceptable level.
- Discipline issues: Discipline issues continue to disrupt classrooms and teachers are often prevented from dealing firmly with disruptive students.

Family Involvement

The program successfully increased parents' involvement in their children's education and family support for literacy development. The depth of the observations about program impact is limited because of minimal data. From the data collected in the parent and staff focus groups and home inventory comparisons, several observations can be made about the three-year progress. First, family involvement has increased, particularly in the area of at-home involvement. Parents reported that they have been using the teachers' and home visitors' suggestions to support their children's literacy activities. For three years the Book-in-a-Bag program continued to be parents' most used and favorite school project. For many families it provided the only children's book in their home. A regular place for children's schoolwork has been established in most homes. Parents regularly asked their children about schoolwork and reading with the child has increased considerably. While the home environment still lacks many of the resources (such as children's books, games, blocks, and writing materials) parents began using home materials they do have for teaching their children. Labels on cans and boxes became reading materials. Signs were read while driving to identify letters. Parents reported their children practicing writing their names on any paper in the house. Parents attending the focus groups continued to request more activities they can do with their children to support their learning. Case studies reinforce the observation that parents are helping their children learn at home:

> *Lupe lives with her mother, father and brother. Her family has been in the U.S. for four years, all of which have been in St. Paul. Her mother is currently a housewife. Her educational background is completion of a high school degree. This is Lupe's second year at Head Start. At home, Lupe likes to read books, tell stories, and works on puzzles. She also likes to help with cooking and setting the table. When helping to cook, she counts things. Toward the end of the school year, she would write her name, cut, draw, cook, pretend to read books and memorize books, but only in English. Activities that Lupe and her mother do together include reading, cooking, drawing, counting, playing outside, going for walks and visiting the children's museum. Her mother felt that reading, counting and talking about things helped her daughter learn. Reading is something that the family is able to do regularly. The mother, father, and older brother all help Lupe read.*

> *Fahima and her mother came from Somalia and have been in the U.S. for five years, all of which have been in St. Paul. Her father and siblings are still in Africa. Fahima's mother's reason for enrolling her in Head Start was that her daughter needed to learn more things and improve her English skills to prepare her for kindergarten. The mother does know her daughter's teachers. She said she mostly used the books and newsletters to help support her daughter's learning. What the mother valued most about her daughter attending Head Start is, "She has become better at expressing love to family. She obeys better and plays better with other children. She also reads better." The mother would like to see more computers available at Head Start and more work activities. However, she is very satisfied with her child's overall experience. At home,*

Fahima does the following activities: color, count, read stories, attend cultural activities in the Somali community, and other activities to learn about her culture. The mother does help her child with homework, but because she is now working full-time, it is difficult to do many things with her child. She does have some people in the Somali community who help her daughter with reading books.

As children came home proudly demonstrating what they learned and communication from teachers increased, parents became increasingly aware of their child's progress. The information was well received by the parents. The more parents knew the more they wanted to know. In the third year, parents in some sites asked for written comments from teachers once a week. The newsletters were effective ways the school communicated about classroom activities, themes and activities families could complete to support their child's classroom work. Telephone calls, verbal reminders when parents picked up their children and bus driver comments were the most effective ways the program used to let parents know about upcoming events requiring their attendance or participation. Monthly parent meetings changed from the first and second year when committee reports were tediously translated into two or three languages, to the third year when meetings consisted of demonstrations and parent activities mimicking children's activities. This change also helped to keep parents well informed. Parents also appreciated increased contact with their child's teacher at the monthly parent meetings.

Lupe's mother stated that she had enrolled her daughter in Head Start because she felt her daughter needed to know people, other than her family. She felt that this would not only help improve her behavior, but also, it would prepare her for school and help her learn English. Her mother knew her teacher and had met with her. She talked about being able to speak in Spanish with her child's teacher. She used everything that is sent home to help her child learn, including bilingual books, and activity sheets. Interestingly, the mother said that she liked the bilingual books, but her daughter preferred to be read to only in English. Lupe's mother identified several activities that support her child's learning. They included helping her to focus on writing, having a scheduled time for reading, and listening to the child when she wants to share her ideas. What is difficult for the mother is that she has difficulties reading in English, but her daughter prefers to be read to in English. She is interested in obtaining a library card, but does not know how to do so. The evaluator explained the process to her. The mother said that there used to be a home visitor, but that no one has come for months. She liked having the home visitor come and missed that interaction.

Parents with a few exceptions were overwhelmingly pleased with their child's Head Start experience and development of literacy skills. For parents with limited English abilities, bilingual staff members helped them feel welcome and informed. However, at one center, parents painfully retold stories about their children being bullied, hit and verbally abused by other children, causing their child to not want to attend school. Serious disruptive behavior in

the classroom continued to plague some classrooms, putting learning at a stand still and interfering with children's positive school experience.

Family involvement is the least developed part of the program and remains the greatest challenge. Family involvement, like effective teaching practices, varied across classrooms. Some teachers are adept at communicating with parents and involving families in creative ways. In those classrooms, family pictures grace the walls. Family cultural symbols are used as learning opportunities. Parents were warmly welcomed and meaningful activities were found for them to do in the classroom. Other classrooms minimally involved parents. Few examples of family life, culture or activities were encouraged. Frequently written materials went home that were not translated into languages the parents can read. In addition, the home visitor component of the program has only been operating for the past one-and-a-half years. The hiring practices of Head Start complicated and slowed the home-visiting component of the program. Roles of home visitors are still unclear to many families and teaching staff. Parents still confuse home visitors with family advocates and case study evaluator, all who visit families in their home.

The Head Start's enrollment practices also interfered with family involvement. Parents in the first and third years complained that slow admissions practices caused long waiting lists and late admission. Children entered classrooms where relationship among their classmates had already begun to solidify. Parents requested an afternoon or morning classroom because of their schedules and are unable to get it. In the early days of the school year, parents participate in an orientation practice that they report overwhelmed and confused them, particularly recent immigrants who are unfamiliar with American educational practices and government regulations.

Factors such as parents' finances and work schedules also influence family involvement. One case studies illustrates this:

> *Neng is attending HOPE Academy charter school for the 2001-02 academic year. She is in first grade. As the youngest child, she receives help from her older siblings. Her father works first shift while her mother works the second shift. According to the mother, the family is in a very stressful situation with both parents working and hardly ever seeing each other. The mother feels that she has very little time to spend with her children. Since she works in the evening, she is not able to be with the children when they come home at night. She cannot attend conferences so her husband has to do so. She stated that her husband was satisfied with their daughter's progress in school. Her teacher thinks she is doing well, but is still quite shy.*

Annual Findings
1999-2000 (First Year)

Strengths:

- Book-in-the-bag program: Focus-group parents reported this as the most-used parent-school activity.
- Parent-teacher conferences: Focus-group parents reported being pleased with the conferences.
- Fieldtrips: Focus-group parents reported enjoying the opportunity for their children and themselves to go on fieldtrips, especially the Children's Museum trip.

Challenges:

- Language barriers: Many focus-group parents reported a desire for more materials to be translated into their home language.
- Communication: Many parents requested more information about classroom activities and their children's progress in the classroom than they received. Specifically, monthly center meetings tended to be dominated by reports from various committees, and did not include as much information on children's progress or classroom curriculum as parents would have liked.
- Cultural attitudes to learning: Families' attitudes about school seemed to affect parent involvement. Some families seemed to believe that all learning should take place at school.

2000-01 (Second Year)

Strengths:

- Communication: Focus-group parents reported feeling informed about their children's progress. Unlike the first year, no parents asked for additional feedback about their children this spring.
- Book-in-a-Bag program: For the second straight year, focus-group parents reported this as the most-used parent-school activity.
- Center newsletter: reading the newsletter was reported as the second most-used activity, and some parents reported a special appreciation of the newsletter being translated into their home language. The newsletter seemed to help the parents feel informed about their child's progress as well as used home-based learning activities.
- Center meetings: Reflecting parents' concerns from the previous year, this year center meetings focused more on children's progress and classroom curriculum.
- Teacher home visits: Focus-group parents mentioned these visits as effective in helping them learn about their child's progress and how they could support their child's learning.
- Home Literacy Visitors: Four home literacy visitors visited with 100 families in an effort to identify individual parent needs and develop and share information and materials with parents.

Challenges:

- Literacy home environment: the majority of the 36 homes profiled by Home Visitors lacked many of the materials that would support a child's literacy development, such as a regular

place for children to do school activities and adequate learning materials. Focus-group feedback supported these observations.

- Volunteering: For the second year, few focus-group parents reported participating in volunteer opportunities.

2001-02 (Third Year)

Strengths:

- Literacy home environment: This year more than 75 percent of the 40 families profiled by the Home Visitors had a regular place for their child to do homework and 100 percent had writing materials and children's books in the home.
- Parental involvement at home: More families reported doing various activities with their child this year, according to surveys by Home Visitors. Parents were especially active in looking through their child's backpack and talking with their child about school.
- Family involvement in reading: Families were reading more to their children this year and using a wide variety of materials, according to surveys by Home Visitors. Also, almost 60 percent of home visit families reported having a library card in Spring 2002.
- Family-child interaction: Home visit families reported working on a variety of literacy activities at home with their children, such as working on colors and writing names. Playtime was reported to have decreased form the previous year.
- Awareness of classroom activities: Parents' level of awareness of activities increased slightly from the previous year, according to surveys by Home Visitors.
- Book-in-a-Bag: This activity continues to be popular among families.
- Home Literacy visitors: These home visitors were repeatedly cited as providing valuable support to families.
- Center newsletter: This continues to be a favorite form of communication, and at some sites it has increased in frequency and become multi-lingual (although at one site, it has ceased to be printed in languages other than English due to an increase in the number of languages spoken by families and a lack of resources).
- Parental enthusiasm: Teachers at most sites reported parents being more enthusiastic this year, and some parents reported visiting classrooms more often.

Challenges:

- Parent focus group involvement: Spring focus group attendance was down from fall attendance at three sites this year (although it increased at one site).
- Reaching all parents at their own level: The program has not demonstrated an ability to reach many parents who may have cultural or financial barriers to participating in their children's learning experiences.
- Parents' desire for adult literacy and community resources: More parents are increasingly asking for resources and help for themselves rather than children-centered help.
- Streamlining resources: Some parents feel there are too many different people visiting them at home (teachers, advocates, home literacy visitors, case study evaluators) and others are confused as to who is there to provide what service.

Sustainability

One of the Words Work! goals was that the program would be sustained by the collaborating agencies after the foundation funding ended. Words Work! has made sizable gains in ensuring sustainability but sustainability is still questionable. Several factors contribute to the program's continuance at Head Start, including the program's staff members' strong commitment to developing children's literacy and their knowledge of effective instructional techniques. Many of the program's teaching strategies and classroom materials have become part of the non-Words Work! classrooms. Recent interviews suggested that competition between program teachers and non-Words Work staff members has been reduced and non-Words Work staff members seem anxious to learn about the program and replicate the effective teaching strategies. MLC staff members have warmly welcomed the program's home visitors and continued to link the program staff with adult literacy resources.

In spite of the program's grounding in staff members' skills, enthusiasm and commitment, the challenges are formidable. Head Start's structure, personnel policies, leadership and communication continue to interfere with successful program outcomes and institutionalizing Words Work!. The lack of an effective system of accountability is foremost. The inequity among classrooms and centers lessened with training and strong support but were not eliminated. Accountability is required. Low pay scale and pay raises based on tenure rather than merit remain disincentives for teachers to improve and stay at Head Start. Only 40 percent of the starting teachers remain in the program after three years. Little time exists for teachers to reflect, plan and modify instruction. For three years teachers continuously explained how planning time was filled with completing paperwork with little relevance to their classroom practices. The program was forced to pay teachers for training and planning time. Time-consuming hiring practices kept potential candidates from being selected and positions were frequently unfilled. The lack of communication among centers, agency divisions and management prevented all staff members from understanding the program, its impact and relationship to their job. Resistance grew when uncertainty existed. Plans for replication become tenuous when top leadership positions are vacant and interim staff people are making decisions. The lack of leadership and charges of institutional racism have created a strained atmosphere of tension and uncertainty.

The integration of the program into the MLC structure is also challenging. The home visitor program is a new venture for MLC. Pre-school children and their families are new target groups. MLC continues to question the fit of the Words Work! program with the agency's focus on adult and school-age children's literacy.

Annual Findings
1999-01 (First Year)

Strengths:

- Staff enthusiasm: Words Work! staff reported being greatly challenged, but also demonstrated a desire to learn about best practices and improve their own teaching skills.
- Teacher flexibility: Words Work! teachers demonstrated great ability to both adapt to the challenges of the program and to modify the curriculum to meet the special needs of individual students and their families.

Challenges:

- Staff pay: The low Head Start pay schedule made it difficult to recruit and retain staff. This leads to negative results including high turnover and little incentive for staff to excel.
- Staff time: Staff members had little time for planning and reflection. In addition, the positions of center manager and teacher were combined at two of the sites, leading to many instances of children being shortchanged while a staff member was called out of classroom to perform administrative duties.
- Communication: Little communication existed among the various organizational levels of head Start about Words Work!
- Philosophical issues: Philosophical differences between the Words Work! program and the early childhood development field presented challenges to the program. The early childhood field has concentrated on social, physical and emotional growth rather than literacy skill development. Traditional classroom delivery of literacy skills were seen as not developmentally appropriate for pre-school children.

2000-01 (Second Year)

Strengths:

- Identifiable program outcomes: Words Work! identified outcomes presented a model for Head Start programs undertaking an agency-wide effort to develop outcomes.
- Strong administrative support: The Head Start associate director strongly advocated for the Words Work! program.
- Staff influences: Words Work! staff was effective in helping train non-Words Work! Head Start staff in both formal and informal ways.
- Piloting concept: Such Words Work! pilot ideas as the 3-year-old classroom were considered for integration into Head Start program
- Professionalism: Words Work! introduced an increased level of professionalism into Head Start program. For instance, outcomes were developed, and planning and teamwork increased.
- Staff enthusiasm: Words Work! staff members were observed to be taking on leadership and increasing risk-taking such as speaking up at meetings, creating curriculum and problem solving.

Challenges:

- Staff pay: A low and inequitable pay scale continued to hinder efforts to recruit and retain the best teachers.
- Staff time: Lack of time for teachers to plan and reflect continued to present a challenge. Head Start paper work took limited time away from planning time. Additionally, teachers continued to hold responsibilities as center managers, stretching their availability beyond reason.
- Discipline policies and procedures: Agency discipline regulations and minimal resources for seriously disruptive children cause some children to wait six to nine months to receive the appropriate services. In the mean time, children in the classroom with these children suffer and learning is hindered.

- Communication: a lack of communication among Words Work! divisions, such as family advocacy and education was observed.
- Staff tensions: Competition between Words Work! and non- Words Work! staff members led to tension among many centers.
- Management leadership: Head Start management generally lacked understanding of and support for Words Work! goals, contributing to tensions among the agency.
- Lack of strategic plan: The lack of a Head Start strategic plan complicated the possibility of Words Work! becoming a part of the program's long-term goals.

2001-02 (Third Year)

Strengths:

- New structural model: A new Head Start model with a Words Work! site at the core of each cluster was developed and considered as an option for restructuring.
- New materials: Classroom books and literacy materials for all Head Start classrooms were purchased.
- Staff training: Literacy-based instructional training for non-Words Work! staff members occurred.
- Impact on Minnesota Literacy Council (MLC): MLC has begun exploring a relationship with young children when they have worked exclusively with adults and school-age children.
- Words Work! leadership: In spite of tremendous agency chaos from agency's leadership leaving and charges of institutional racism, the program's coordinator kept staff members focused on children and learning.
- Increased awareness: Requests for project lessons learned and questions about the relationship between Words Work! and the literacy department show an increased level of awareness of Words Work! program by Head Start staff.
- Teacher enthusiasm and professionalism: Many teachers were observed sharing strategies, singling out weak areas to work on and modifying instruction based on assessment data.
- Professional development: Staff is getting direct feedback and the opportunity to practice and share what works with each other.
- Program goals: When centers and classrooms had specific goals and focused on them, positive results on learning are seen. For instance, one center's emphasis on increasing rhyming skills led to leaps in children's rhyming performance.

Challenges:

- Institutional climate: Tremendous change among leadership occurred, with the directors of Head Start and Ramsey Action Program leaving. In addition, a charge of institutional racism was investigated during much of the year. In addition, the smallest progress was made in reducing racism in classrooms and decreasing competition among Head Start centers.
- Discipline: Teachers continue to be ill-equipped (on an institutional level) to deal with many behavior issues.
- Accountability: Currently, no system exists for monitoring and ensuring the quality performance of all staff. Some sort of staff accountability imbedded into the system would help.
- Staff pay: This continues to be low.

- Staff time: More time and money for intense training would likely help teachers be more prepared to meet program challenges.

CRITICAL FACTORS

Over the three years, several factors consistently influenced the success of the program. Children's literacy abilities grew due to the curriculum and instructional practices, in particular:

- The SPARK curriculum;
- The creation of children's activities to reinforce the SPARK concepts, learn the ABCs and develop phonological skills and vocabulary;
- Language-rich environment, including the home language of all children ;
- Literacy-based routines that became a regular part of the child's school day;
- Intentionally focusing on the desired literacy skills;
- Bilingual teachers to engage all children; and
- Integrating literacy activities into the all parts of the school day.

Specific teaching techniques and strategies for each literacy outcome are listed in the appendix of this report.

The training, mentors and time to reflect and share effective instructional practices were effective ways Words Work! improved teaching abilities and instructional practice.

Family involvement and support for their child's literacy development also grew. Several program activities and practices encouraged family involvement, including:

- The literacy home visitors linking family activities with classroom activities and providing children's books and other literacy materials for family reading;
- The Book-in-the-Bag program allowed children to bring home a children's book ,often the only or one of a few children's books in the home;
- Center and classroom newsletters informing parents about classroom activities and ways parents could support their child's continued learning;
- Monthly center meetings that simulated the child's classroom experience and increased contact with the child's teacher;
- Parent-teacher conferences;
- Bilingual staff members and classroom practices that respected family culture; and
- Verbal communication by teachers or bus drivers about events and child's progress.

Insufficient data exist at this time to determine if family involvement activities spurred children's literacy development.

The sustainability of the Words Work! program was also enhanced by several critical factors, such as:

- The strong leadership of the program coordinator and involvement in the Head Start management decisions;
- Training of non-Words Work staff members in literacy-based instructional techniques;

- Shared information about the Words Work! philosophy, values, assumptions, goals and impacts with Head Start management and non-Words Work! staff members; and
- National Head Start's requirement to develop outcomes, including literacy and evaluating the local program's effectiveness of achieving the outcomes.

While the program brought about many desired changes and progressed toward program outcomes, several challenges exist. Many of these challenges persisted over the three years, including:

- Institutional barriers that interfere with children's learning, family involvement, Head Start communication, accountability, leadership and program replication;
- Limited data and evaluation of the home-visiting component of the program and its relationship to children's literacy skills;
- Minimal strategies to involve families of varying cultures;
- Sharing of effective instructional practices and development of teaching skills, particularly to build children's phonological skills, ABCs and conceptual vocabulary;
- Wide range of teaching abilities across classrooms and centers; and
- Sustaining the costly home visiting component within an agency that has no previous experience with pre-school children and their families.

RECOMMENDATIONS

The Words Work! program has been particularly adept at addressing recommendations included in each year's evaluation report. Program leadership and center staff members have been quick to solve problems and find creative solutions. Unfortunately some challenges still remain. The recommendations below are offered to improve children's literacy development, instructional practice, family involvement and replicate and sustain the program beyond foundation funding. Specific suggestions include:

- Continue and enhance the same pattern of staff development that includes training, direct feedback, mentoring, videotaping, reflection and sharing of best practices;
- Clarify teacher expectations of performance and develop a system of accountability to ensure quality performance of all teachers, in particular, target areas for improvement with follow-up;
- Increase teacher understanding of phonics and its relationship to literacy and reading and continue to develop and share effective teaching strategies for phonological skills, particularly rhyming, vocabulary and ABCs;
- Set program standards that outline pre-school literacy skills for children's success in kindergarten;
- Improve the discipline policies and system, using classroom teacher ideas, to reduce the classroom disruption due to children with severe behavior problems;
- Increase coordination among the home visitor, classroom teachers and family advocates;
- Continue to develop unique strategies to involve families of varying cultures, including increased communication in the home language and culturally-appropriate materials;
- Ensure bilingual teachers with the same languages as the children;
- Investigate the relationship between family literacy practices and children's literacy development;
- Replicate best practices and continue to train staff members in non-Words Work! sites;
- Involve teachers in enrollment decisions; and
- Develop a strategy to inform and involve new Head Start leaders in developing policies and procedures that support the program's sustainability and children's literacy development.

CONCLUSION

The Words Work! program has progressed toward achieving its outcomes over the past three years. In particular, the program has successfully helped pre-school children master many literacy skills, including knowledge of a book's operation, meaningful counting, ability to write their name and vocabulary including colors, opposites and many other language skills. While growth in phonological skills, conceptual vocabulary and ABCs was not as great as other literacy skills, the growth was sizable and statistically significant. In addition, the growth for children of color accelerated and reversed the two-year trend of parallel progress. The long-standing achievement gap between children of color and white children began to close this year.

The accelerated growth and mastery is due to the effective instructional practices of program teachers and a literacy-dominated curriculum. Teachers continue to develop new and creative ways to teacher children literacy skills. Unfortunately, teaching abilities vary from classroom to classroom and are reflected in differences in children's mastery of literacy skills.

Family involvement also grew over the three years. The first year of the home-visiting component of the program completed this year, resulting in increased family involvement and support of their child's literacy development. Home reading increased, the home learning environment of participating families became more conducive to literacy development and parents' knowledge of classroom activities increased. Family enthusiasm for the program continued to grow, with families often in focus groups offering few suggestions.

Challenges remain. Significant institutional barriers continue to interfere with children's literacy development, family involvement and the sustainability of the program. These barriers must be addressed. The program must continue to be strengthened in the existing centers, particularly in areas of phonological skill, conceptual vocabulary, ABCs and family involvement. At the same, incremental replication of Words Work! into non-program sites should continue.

APPENDIX

CRITICAL FACTORS

Instructional Techniques

1999-2000

- Deliberate connection between learning and classroom activities stimulated literacy development.
- Multi-lingual education improved effectiveness of instructional techniques.
- Socialization provided critical learning behaviors for school success.

2000-01

- Deliberate connection between learning and activities continues to stimulate learning.
- Creation of age-specific classrooms led to improvements in behavior and social skills observed by teachers. Assessment results could not confirm these observations.

2001-02

- Intentionality: Teachers have continued deliberate connection between learning and activities.
- Praising children for their efforts has reinforced positive learning associations for them.
- Incremental learning: Many teachers have begun to break down the learning process into incremental steps, which helps children learn.
- Multi-lingual classrooms: using more languages in the classroom helped boost children's self-esteem and fostered the learning process.

Staff Development and Support

1999-2000

- Teachers assumed responsibilities and challenges of fairly rigid SPARK curriculum with enthusiasm.
- Staff used evaluation results to improve programming.
- Staff modified curriculum to address special needs of individual students.
- Extra day of staff development for next year was scheduled, without reducing classroom hours.

2000-01

- Experience from first year contributed to teachers' ability to modify curriculum to meet center goals.
- Teachers benefited from additional support from literacy staff, mentors, home visitors, family advocates, and bilingual staff members.
- Teachers did not have necessary support to meet the special needs of very disruptive children.

2001-02

- Mentor teachers in the classrooms have demonstrated techniques and initiated more strategizing.
- Flexibility: Teachers have learned to use a variety of strategies in order to reach individual children.
- Staff have learned to speak languages other than their own.
- Teachers have continued to modify instruction based on evaluation data.

Parent Involvement and Family Literacy

1999-2000

- Negotiations were begun with Minnesota Literacy Council to oversee family literacy outreach workers.
- Head Start family advocates became more integrated into Words Work! program.
- Parent attitudes about school and teaching need to be sensitively addressed. Increasing parents' understanding of Head Start and Words Work! will affect these attitudes as well as meet parents' requests for more information about their children's progress.

2001-02

- Home literacy visitors have added an important connection between families and school.
- Oral announcements for events have more impact in getting parents to attend.

Culture

1999-2000

- Staff understanding of cultural issues will impact both children's learning and parent involvement.

2000-01

- Staff understanding of cultural issues will impact both children's learning and parent involvement.

2000-01

- Staff understanding of cultural issues will impact both children's learning and parent involvement.

Institutional Practices

1999-2000

- Having combined position of center manager and teacher at two sites shortchanged both positions.
- Staff members never seem to have enough time to do all that is required and – many feel they have administrative requirements that do not help children learn.
- Staff turnover disrupts children's learning.

- RAP procurement and hiring process is cumbersome and slow.
- Low Head Start pay schedule makes it difficult to attract and retain quality staff.
- Communication is poor among various organizational levels of Head Start about Words Work!.

2000-01

- Lack of time for teachers to plan and reflect.
- Minimal support or resources for staff to deal with very disruptive children.
- Limited teacher consultation in classroom placement of children.
- Teachers continuing as center managers.
- Lack of communication among Head Start divisions.
- Low Head Start pay schedule makes it difficult to attract and retain quality staff.
- Inequitable pay system.
- Competition among Words Work! and non-Words Work! staff.
- Lack of management leadership in supporting Words Work! goals.
- Lack of Head Start strategic plan of which Words Work! could become a part,
- Less time for Words Work! project coordinator for project implementation and academics with her time increasingly spent at Head Start meetings communicating and strategizing to increase the likelihood of project sustainability.

2001-02

- New structural model: A new Head Start model with a WW! site at the core of each cluster was developed.
- New materials: There was an increase in the purchase of classroom books and literacy materials for all Head Start classrooms.
- Lack of time for teachers to plan and reflect.
- Minimal support or resources for staff to deal with very disruptive children.
- Limited teacher consultation in classroom placement of children.
- Program goals: When centers and classrooms have specific goals and focus on them, positive results on learning are seen. For instance, one center's emphasis on increasing rhyming skills led to children's increased rhyming performance.

RECOMMENDATIONS

Effective Instructional Techniques

2000

- Continue to train staff members in new instructional techniques and find ways to share effective practices among all staff members.
- Find ways to supplement SPARK curriculum with materials and activities that develop phonological awareness, vocabulary, ABCs, and counting.
- Continue to use wall materials to support instruction.
- Find more equitable ways for all students to use computers and link use directly to literacy development.
- Ensure that every classroom has bilingual staff members and continue to reinforce key words in children's home languages.
- Continue to develop children's social skills and reinforce among staff members the importance of socialization to literacy and school readiness.

2001

- Provide additional classroom resources such as SPARK stories on tape and additional literacy materials besides books.
- Provide additional bilingual teachers and staff members.
- Assess children's knowledge of ABCs in the fall to ensure accurate baseline data.
- Set program standards that outline pre-school literacy skills required for children's success in kindergarten.
- Further examine the impact on literacy development of classroom factors such as staff turnover, instructional techniques, and age-specific classrooms.

2002

- Focus on vocabulary development and integrating vocabulary into all parts of the day.
- Focus on the sequence of the learning process: breaking down the learning process into incremental steps.
- Increase use of videos.

Staff Development and Support

2000

- Find ways to support the professional development of all staff members.
- Use meaningful ways to recognize staff effectiveness.
- Provide resources and materials the staff requests to facilitate their teaching.

2001

- Increase time for reflection, feedback, and dialogue with teachers within and across centers.
- Begin Fall with a review of the learning from Spring evaluation.
- Provide adequate resources to address special behavior management.

- Challenge teachers to improve their instructional skills and move children to another level.

2002

- Continue with and enhance same patterns for professional development for staff: direct feedback, opportunity to practice, training, sharing.
- Formalize best practices techniques.
- Find time and money for more intense staff training, perhaps beginning-of-year training or summer sessions.
- Focus teacher training on phonics and vocabulary development in order to increase teacher understanding of concept.
- Develop a system to monitor and ensure the quality performance of all teachers and target areas that need improvement with effective follow-up techniques.
- Improve both policy and system for teachers dealing with behavior problems.
- Increase teacher input into classroom placement.

Parent Involvement and Family Literacy

2000

- Increase reports parents receive about their children's social and literacy progress.
- Offer parents specific methods for supporting their children's literacy development at home.
- Spend most parent meeting time demonstrating classroom literacy activities and teaching techniques.
- Find appropriate ways to explain to parents the various ways that children learn, the relationship of learning to developmental stages, and the Head Start approach to learning.

2001

- Find additional ways to involve families.
- Coordinate the home literacy visitor with classroom work and other Head Start departments.
- Continue to provide home learning activities for children and parents.

2002

- Work on master plan for outcomes of increased parent involvement.
- Find ways to reach all families at their level.
- Develop a more coordinated system of resources involving home literacy visitors, family advocates, evaluators, etc.
- Find cost-effective ways of translating more newsletters and other materials into parents' home languages.

Institutional Practices

2000

- Eliminate combined position of center manager and classroom teacher.
- Reduce administrative duties of instructional staff.
- Facilitate the transition and training of new staff members.
- Increase communication about Words Work! among various levels of Head Start and RAP.
- Work with Head Start and RAP to find creative ways to speed hiring and procurement and to raise wages.

- Begin to discuss and address the philosophical differences between Words Work! and early childhood development field.

2001

- Eliminate combined position of center manager and classroom teacher.
- Eliminate the competition between Words Work! and non- Words Work! staff members.
- Consider educational needs of children in enrollment practices.
- Address pay inequities of staff members.
- Reduce time positions are unfilled.
- Continue to communicate with and educate Head Start leadership about the project.
- Continue to foster communication among Head Start departments.

2002

- Allow non-Words Work! sites to begin incrementally changing towards WW! program now.

Words Work! Initiative
Student Assessment Data – Fall 2001/Spring 2002
Prepared by ACET, Inc.
May 23, 2002

Words Work! Head Start centers (Baker, Bigelow, McDonough, and St. Clair) used a variety of tests to measure student academic performance, to include the SPARK checklist, Henderson Phonological Assessments, ABC/Attempt to Print, and the Boehm Test of Basic Concepts. All the assessments were administered for each center in fall of 2001 and again in the spring of 2002. Only children who took both assessments in the fall and again the spring were included for longitudinal analysis. At St. Clair 48 of 51 children (94 percent) originally tested in the fall took the assessments again in the spring. Fifty-five of 68 children (81 percent) at Baker took the assessments in both periods. Bigelow and McDonough shared identical mobility rates at 79 percent. Following are the results from the assessments.

SPARK Assessment

Overall, all four Head Start centers showed an increase in the percent of Words Work! children who could complete each of the 40 activities on the SPARK Assessment[1].

- The largest range of growth rate was observed at McDonough (0 to 100 percent).
- Baker had a growth rate that ranged from 4 to 100 percent.
- The cohort group at Bigelow showed a growth rate that ranged from 26 to 93 percent.
- At St Clair, the growth rate for children ranged from -4 to 89 percent.

The table below presents activities with the *largest* proportion of student growth.

Baker	Bigelow	McDonough	St. Clair	All Centers
4+ body parts ▲ 100%	Points to yellow ▲ 93%	Names circle ▲ 100%	2-step directions ▲ 89%	Name in print ▲ 87%
Conversations ▲ 100%	Names Circle ▲ 91%	Name in print ▲ 100%	Name in print ▲ 82%	4+ body parts ▲ 86%
Points to red ▲ 88%	Name in print ▲ 91%	Conversations ▲ 100%	Points to red ▲ 77%	Names circle ▲ 86%
Names orange ▲ 86%	Short song/rhyme ▲ 86%	2-step directions ▲ 100%	Conversations ▲ 71%	Conversations ▲ 85%
Names items ▲ 85%	Names yellow ▲ 85%	4+ body parts ▲ 96%	4+ body parts ▲ 69%	Points to red ▲ 82%

The table below shows activities with the *smallest* proportion of student growth.

Baker	Bigelow	McDonough	St. Clair	All Centers
Address ▲ 4%	Address ▲ 26%	Address ▲ 0%	Address ▼ 4%	Address ▲ 9%
Sequence ▲ 31%	Asks what if ▲ 39%	Positional words ▲ 28%	Names rectangle ▲ 26%	Positional words ▲ 45%
Asks what if ▲ 36%	Opposites ▲ 47%	Own feelings ▲ 39%	Opposites ▲ 33%	Sequence ▲ 46%
Names rectangle ▲ 46%	Own feelings ▲ 48%	Sequence ▲ 39%	Points to orange ▲ 33%	Opposites ▲ 47%
Names square ▲ 47%	Names rectangle ▲ 49%	Short song/rhyme ▲ 43%	Names triangle ▲ 37%	Asks what if ▲ 47%

[1] To measure student progress, a conditional proportion formula was applied to calculate the proportion of children at each center that had room to grow, and did grow from fall 2001 to spring 2002 (i.e. the percent of children eligible to grow in the fall minus the percent of children eligible in the spring divided by fall eligibility). Growth was defined as movement from "no" or "emerging" to "yes" on any SPARK activities.

BEST COPY AVAILABLE

Henderson Phonological Assessment

Overall, Words Work! children on average made statistically significant progress from fall 2001 to spring 2002 in all six areas of the Henderson Phonological Assessment[2] and in the ABCs. The following table shows areas with significant differences in mean scores for each center followed by all centers (as measured by a T-Test).

Center	Area (Language)	Possible Score	Mean (Fall)	Mean (Spring)	Mean Difference	Change
Baker	Book (Eng)	(0-7)	2.62	5.43	2.81 ** (n=53)	▲
	Story (Eng)	(0-4)	1.09	2.04	0.94** (n=53)	▲
	Word (Eng)	(0-6)	2.00	3.44	1.44 ** (n=53)	▲
	Syllable (Eng)	(0-6)	1.43	3.65	2.22** (n=49)	▲
	Sounds (Eng)	(0-6)	0.49	2.76	2.27** (n=49)	▲
	Book (Home)	(0-7)	3.94	5.76	1.82** (n=17)	▲
	Syllable (Home)	(0-6)	1.25	3.69	2.44** (n=16)	▲
	ABC	(0-26)	3.34	11.66	8.31** (n=35)	▲
	Attempt to Print	(1-6)	3.98	5.17	1.19** (n=54)	▲
Bigelow	Book (Eng)	(0-7)	4.73	6.00	1.27** (n=101)	▲
	Story (Eng)	(0-4)	1.79	2.32	0.52** (n=101)	▲
	Word (Eng)	(0-6)	2.30	3.83	1.53** (n=101)	▲
	Rhyming (Eng)	(0-6)	0.38	1.59	1.22** (n=101)	▲
	Syllable (Eng)	(0-6)	2.00	4.08	2.08** (n=101)	▲
	Sounds (Eng)	(0-6)	0.21	0.47	0.26* (n=101)	▲
	Book (Home)	(0-7)	5.44	6.88	1.44** (n=17)	▲
	Story (Home)	(0-4)	1.75	2.31	0.56* (n=15)	▲
	Word (Home)	(0-6)	1.38	2.25	0.88* (n=15)	▲
	Syllable (Home)	(0-6)	0.94	2.13	1.19* (n=15)	▲
	ABC	(0-26)	6.41	16.04	9.63** (n=53)	▲
McDonough	Book (Eng)	(0-7)	5.20	6.51	2.90** (n=75)	▲
	Story (Eng)	(0-4)	1.69	2.51	0.96** (n=75)	▲
	Word (Eng)	(0-6)	0.67	1.63	0.93** (n=75)	▲
	Rhyming (Eng)	(0-7)	0.09	0.52	0.43** (n=75)	▲
	Syllable (Eng)	(0-6)	1.29	4.17	2.88** (n=75)	▲
	Sounds (Eng)	(0-6)	0.24	1.05	0.81** (n=75)	▲
	Book (Home)	(0-7)	5.12	6.38	1.27** (n=26)	▲
	Story (Home)	(0-4)	2.04	2.81	0.77** (n=26)	▲
	Syllable (Home)	(0-6)	0.65	1.73	1.08** (n=26)	▲
	Word (Home)	(0-6)	1.50	2.92	0.96** (n=26)	▲
	ABC	(0-26)	6.98	15.32	8.34** (n=44)	▲
	Attempt to Print	(1-6)	4.31	5.55	1.24** (n=75)	▲

[2] Children fluent in English were assessed in English, and children limited in English were assessed in both English and their home language.

Center	Area (Language)	Possible Score	Mean (Fall)	Mean (Spring)	Mean Difference	Change
St. Clair	Book (Eng)	(0-7)	5.11	6.35	1.24** (n=46)	▲
	Story (Eng)	(0-4)	2.22	2.74	0.52** (n=46)	▲
	Rhyming (Eng)	(0-6)	0.30	1.39	1.09** (n=46)	▲
	Syllable (Eng)	(0-6)	1.26	3.07	1.80** (n=46)	▲
	Word (Home)	(0-6)	0.57	2.71	2.14* (n=7)	▲
	ABC	(0-26)	4.40	12.00	7.60** (n=25)	▲
	Attempt to Print	(1-6)	3.47	4.57	1.11** (n=47)	▲
All Centers	Book (Eng)	(0-7)	4.52	6.09	1.74** (n=275)	▲
	Story (Eng)	(0-4)	1.70	2.39	0.68** (n=275)	▲
	Word (Eng)	(0-6)	1.78	2.95	1.17** (n=272)	▲
	Rhyming (Eng)	(0-7)	0.24	1.07	0.82** (n=271)	▲
	Syllable (Eng)	(0-6)	1.58	3.86	2.28** (n=271)	▲
	Sounds (Eng)	(0-6)	0.26	0.96	0.70** (n=271)	▲
	Book (Home)	(0-7)	4.76	6.23	1.47** (n=66)	▲
	Story (Home)	(0-4)	1.80	2.52	0.71** (n=66)	▲
	Word (Home)	(0-6)	1.58	2.74	1.15** (n=65)	▲
	Syllable (Home)	(0-6)	1.00	2.38	1.38** (n=65)	▲
	ABC	(0-26)	5.57	14.23	8.66** (n=158)	▲

* Significant at 0.05 ** Significant at 0.01

Boehm Test of Basic Concepts

Overall, Words Work! children on average scored statistically higher on the Boehm Test of Basic Concepts from fall of 2001 to spring of 2002. The possible range of scores is from 0 to 52. The table below shows the mean difference for each center followed by all centers.

Center	(Language)	Mean (Fall)	Mean (Spring)	Mean Difference	Change
Baker	(Home)	33.44	39.06	5.61** (n=18)	▲
Bigelow	(Home)	25.06	38.00	12.94** (n=15)	▲
McDonough	(English)	18.13	28.92	10.79** (n=75)	▲
	(Home)	30.35	37.62	7.27** (n=26)	▲
St Clair	(English)	27.09	35.22	8.13** (n=46)	▲
	(Home)	19.56	33.11	13.56* (n=9)	▲
All Centers	(Home)	28.52	37.49	8.97** (n=69)	▲

* Significant at 0.05
** Significant at 0.01

Factors that Influenced Test Scores

All Centers[3]

A number of factors appeared to influence group test scores such as the children's race, fluency in English, age, gender, enrollment status (i.e. whether the child is a new or returning student), and special needs status.

- **Race:** Non-children of color tend to score higher than students of color on many sections of the phonological assessment and on the Boehm test. However, children of color have exhibited growth at a faster pace from fall-to-spring than non-children of color.
- **Fluency:** Children who were fluent in English scored higher than non-fluent children on both the phonological assessment and the Boehm test. In addition, the learning curve of children fluent in English was slightly higher than non-fluent children on the phonological assessment and the Boehm test.
- **Age:** Five-year olds appeared to score higher on most sections of the phonological assessment and show growth from fall-to-spring at a faster pace with a higher learning curve than younger children.
- **Gender:** Females tend to score higher than male children on one section of the phonological assessment and on the ABCs.
- **Enrollment:** Children who attended Words Work! during the 2000/2001 school year were scoring higher than newly enrolled children on many sections of the phonological assessment and on the Boehm test.
- **Special Education:** Special needs status had a slight effect, with special needs children scoring higher than non-special needs children on one of the phonological measures.

Baker

The primary factors influencing group test scores include fluency in English, age, gender, enrollment status, and home visit status (i.e. whether or not the child received a home visit).

- **Fluency:** Children fluent in English tend to score higher than non-fluent children on many sections of the phonological assessment and on the Boehm test.
- **Age:** Five-year olds tend to score higher than younger children on many sections of the phonological assessment and on Attempt to Print.
- **Gender:** Males tend to score higher than female children on one section of the phonological assessment.
- **Enrollment:** Children who attended Words Work! during the 2000/2001 school year tend to score higher on the Attempt to Print.
- **Home Visit:** On one section of the phonological assessment, children who received a home visit tend to score lower than those children who did not receive a home visit.

[3] The degree the above factors influenced test scores vary with each center.

Bigelow
A variety of factors appeared to influence group test scores, including race, fluency in English, age, gender, enrollment status, home visit status, and being in an age specific classroom.

- **Race:** Non-children of color tend to score higher than children of color on one section of the phonological assessment and on the Boehm test. However, children of color did score higher on another section of the phonological assessment.
- **Fluency:** Children fluent in English tend to score higher than non-fluent children on many sections of the phonological assessment and on the Boehm test.
- **Gender:** Males tend to score higher than female children on the Boehm test.
- **Age:** Five-year olds tend to score higher than younger children on many sections of the phonological assessment.
- **Enrollment:** Children who attended Words Work! during the 2000/2001 school year tend to score higher than newly enrolled children on one section of the phonological assessment and on the Boehm test.
- **Home Visit:** Children who received a home visit scored higher on the Boehm test.
- **Age-Specific:** Children enrolled in an age-specific classroom tend to score higher on the Boehm test.

McDonough
The primary factors influencing group test scores include race, fluency in English, age, gender, enrollment status, and special needs status.

- **Race:** Non-children of color tend to score higher than children of color on some sections of the phonological assessment and on the Boehm test.
- **Fluency:** Children fluent in English tend to score higher than non-fluent children on most sections of the phonological assessment and on the Boehm test.
- **Age:** Five-year olds tend to score higher than younger children on many sections of the phonological assessment and on Attempt to Print.
- **Gender:** Females tend to score higher than male children on one section of the phonological assessment.
- **Enrollment:** Children who attended Words Work! during the 2000/2001 appeared to score higher than newly enrolled children on two sections of the phonological assessment and on the Boehm test.
- **Special Education:** Special needs children scored higher than non-special needs children on one section of the phonological assessment.

St Clair
The primary factors influencing group test scores include race, fluency in English, age, enrollment status, and special needs status.

- **Race:** Non-children of color tend to score higher than cildren of color on two sections of the phonological assessment.
- **Fluency:** Children fluent in English tend to score higher than non-fluent children on most sections of the phonological assessment and on the Boehm test.
- **Age:** Five-year olds tend to score higher than younger children on many sections of the phonological assessment and on Attempt to Print.
- **Enrollment:** Children who attended Words Work! during the 2000/2001 school year, tend to score higher than newly enrolled children on most sections of the phonological assessment, the Boehm test, and on Attempt to Print.
- **Special Education:** Special needs children tend to score higher on one section of the phonological assessment and on another section non-special needs children scored higher.

Words Work! Spring 2002 Parent Focus Group Summary June 12, 2002

Introduction

This report summarizes findings from parent focus groups held in April of 2002 at the four Words Work! sites. The purpose of the focus groups was to learn from parents about three areas:

- Aspects of the Words Work! project that contribute to or impede children's ability to begin reading, loving books, and learning to write and count;
- Factors in the home that influence this progress; and
- Suggested ways that the program can involve parents in their children's learning.

This report presents general themes mentioned by several parents at more than one Words Work! site. It is based on four site-specific focus group reports.

Parent Demographics

Eighty-four parents participated in the Spring focus groups. Almost 50 percent of the participants were at one site, and two sites had 13 or fewer parents attend the focus groups. Most of the parents were mothers, but many fathers also participated. Most reported being aware of and involved in their child's classroom activities. Some were the parents of more than one Head Start child, or had children who had been in the program for two or more years. More parents were Latino than any other race or ethnicity. Most of the Latino-identified parents were Mexican, although some were from other Central American countries. Most of the African parents were Somali. The following table shows self-identified race and/or ethnicity of the participating parents.

Table 1: Race/Ethnicity of Parents

Race/ Ethnicity	Gender	Site									
		Bigelow		Baker		McDonough		St. Clair		All sites	
African	Male		7		4	1	2		0	1	13
	Female	7		4		1				6	15.5 %
African-American	Male	1	2		2		1		0	1	5
	Female	1		2		1				4	6%
American Indian	Male		0		1		0		0	0	1
	Female			1						1	1%
Caucasian	Male		8		0		2	1	8	1	18
	Female	8				2		7		17	21%
Hmong	Male	2	2	2	4	2	6		1	6	13
	Female			2		4		1		7	15.5 %
Latino	Male	1	3	5	26		2	1	3	7	34
	Female	2		21		2		2		27	41%
Site Total		22		37		13		12		84	
Percent of Total		26%		44%		16%		14%		100%	

Focus groups were conducted in English, Hmong, Somali, Spanish, and Tigrigna.

Findings

Parent Perceptions of Children's Learning

As at previous focus groups, parents were generally pleased with their children's progress in the Words Work! program. Many said that their children had learned a great deal. They also seemed as interested in their children learning social skills as literacy skills. Many commented on the positive behaviors their children have learned in Head Start. Several also mentioned the value of the program's multi-cultural environment.

Parents at all sites reported being most impressed with Words Work! teachers. They talked about how teachers are the key to the learning experience, how they show interest in each child, and how comfortable they as parents feel talking to their children's teachers. A typical comment was:

> *The attitudes of the teachers are great. They really want the child to learn.*

However, not all parents reported such positive experiences for their children or their interaction with teachers.

Programmatic Factors that Influence Children's Learning

Parents identified many aspects of the Words Work! program that they feel help their children learn. They mentioned the overall emphasis on leaning (as opposed to day care), the importance of routines, and the opportunity to socialize. They also cited several specific classroom-based practices and activities that help their children learn, including:

- Bringing books home;
- Recitation and repetition;
- Hands-on activities;
- Drawing and coloring;
- Computers; and
- Praise from teachers;

While parents reported being pleased with their children's experience in general, some did note specific areas where they felt the program could improve. (Several facilitators noted that parents seemed reluctant to comment negatively on the program).

Discipline was one area of concern for several parents. Some commented that classes were sometimes disrupted by unruly children. Others mentioned that they felt their child was being

bullied. Some did note that they felt the teachers were capably handling these situations, while others questioned whether or not enough was being done.

In addition to discipline issues, parents shared the following concerns about the program:

- Too much emphasis on play rather than learning;
- Children come home with dirty clothes;
- Materials are only in English; and
- Children haven't mastered specific skills like holding a pencil or recognizing letters and numbers.

Family Involvement

Parents identified many ways in which they and the rest of their families are involved in their children's learning. Many indicated that they understood the importance of a family focus on learning, but some commented that they did not have time to help their children as much as they wanted. Others shared that it was not their job to help with learning either because it was the school's responsibility or language or literacy levels limited their ability to directly support learning.

Parents reported being most frequently involved in the following activities with their children:

- Making up games involving letters and numbers;
- Reading and telling stories, in English and home languages;
- Practicing writing letters and numbers;
- Practicing counting;
- Singing songs; and
- Watching educational television shows.

Many parents noted that they found informal opportunities to fit these activities into their daily schedules with their children, especially during car or bus rides. Several parents said that they used signs to point out letters to their children or incorporated signs into literacy games they made up and played while travelling.

Words Work! Helping Parents to Help Children Learn

When asked about specific Words Work! activities they were involved in, parents most frequently participating in the Book-in-a-Bag program, receiving the center newsletter, and attending center meetings. While parents at all sites expressed appreciation for the literacy home visitors also. Most parents seemed unaware of family math activities (perhaps they did not recognize the name) and did not participate in parent workshops.
Many parents indicated that staff made them feel welcome to visit the classroom and volunteer at any time and made them feel welcome when they came. However, they cited various obstacles as preventing or limiting their involvement: limited education, work schedules, language barriers, financial problems, and transportation issues. Several parents also noted that meeting

times were inconvenient and that allowing them to bring babies to meetings would increase attendance.

Table 2: Words Work! Activities Identified By Parents as Most Useful

Activity	Site				
	Bigelow	Baker	McDonough	St. Clair	All sites
Book-in-the-Bag	♦	♦	♦	♦	♦♦♦♦
Center newsletter	♦	♦	♦	♦	♦♦♦♦
Parent-child home activities	♦			♦	♦♦
Monthly center meetings	♦	♦	♦	♦	♦♦♦♦
Family math activities					
Parent workshops					
Parent training in ECFE classes				♦	♦
Parent-child fieldtrips	♦	♦		♦	♦♦♦
Teacher home visits		♦	♦	♦	♦♦♦
Literacy home visitor visits	♦	♦	♦	♦	♦♦♦♦
Head Start advocate home visits	♦			♦	♦♦
Parent volunteer opportunities				♦	♦

Suggestions for Improvement

While most parents reported being generally pleased with Words Work! and the Head Start program, some did have specific suggestions for improvement. Many of these suggestions were parent-focused, such as having workshops and classes for parents to help them learn English, acquire their GED, or drive a car. Parents also continued to request that they receive more oral and written feedback on their children's progress. Other suggestions included:

- Concentrate more on numbers and/or math skills;
- Have all-day sessions for children, five days a week; and
- Send home some Spanish-English translations for non-Spanish speaking parents to help their children learn more Spanish words.

Words Work! End of Year Staff Reflections 2001-02
June 7, 2002

Part I: Impact

Impact on Children

Words Work! staff consistently reported that the program has had a positive impact on the children this year. Several staff members said this was the result of the classroom environment, which was more focused on literacy skills, more structured, and reflected higher expectations for children. This environment resulted in an increase in specific skills. Staff reported more children performing the following skills:

- writing their own names;
- counting, knowing letters and sounds;
- increasing their vocabulary; and
- rhyming and counting word parts.

Staff also noted improvements in children's attitudes towards learning. One staff person noted that the heightened classroom structure led to increased self-esteem and confidence. Others noted that children are:

- excited to learn literacy skills;
- volunteering to read books on their own;
- independent and knew their routine; and
- able to concentrate better and listen more.

Impact on Instruction

Staff members agreed that Words Work! has had a positive impact on instruction. Many noted that teaching is more intentional this year. Teachers have had more formal training and were described as more confident, creative, and focused. They are also able to successfully incorporate the Words Work! goals into the classrooms. One staff person commented that assessment results influence how teachers plan their weekly lessons. A typical statement was: "We had a greater awareness with planning to integrate our goals into the curriculum."

Impact on Parents/Families

Staff members also agreed that Words Work! has had a positive impact on families this year. Specifically, resources such as the literacy home visitor enable parents to participate more in their children's education. Also, staff reported an increase in communication this year between families and school staff. Newsletters were noted as an important communication tool. Formal and informal communicating took place at parent meetings, field trips, and focus groups.

Several staff members commented that parents are more aware of the program this year and that their activities reflect this awareness as well as an interest in their children's progress. Staff reported that parents are:

- asking teachers questions;

- asking for ways to help their children;
- coming into classrooms to help children print names; and
- doing more home activities.

Impact on RAP/ Head Start or MLC

A positive impact on RAP/Head Start and MLC was also noted. Staff commented that more people are becoming aware of Words Work! and that Head Start's reputation has improved. They also noted that organizational changes such as the creation of the mentor/center manager has enabled them to spend more time both planning and with children. The cluster concept was also cited as enabling information sharing throughout the program.

PART II: Strategies that Make a Difference

What Works for Children

In general, staff members agreed that integrating SPARK concepts into the classroom helps children succeed at learning. Repeating these concepts – as well as repeating stories and vocabulary words – also helps children learn. Staff also commented that children benefit from routines and from teachers who are able to find "teachable moments" throughout the day. Staff members also noted more specific classroom strategies that work for children, including:

- concept words appearing throughout the room;
- index box with all the words in it;
- eye-level presentations;
- practicing rhyming in silly ways;
- using fun and humor;
- signing in each morning and afternoon;
- asking open-ended questions;
- using music;
- allowing children to role play; and
- printing concept words at the table.

What Gets In the Way for Children

Staff noted several impediments to children's learning. Some of these are related to the Words Work! program. For instance, having too many adults in the classroom and allowing outside people to come though classrooms were cited by a few as impeding the learning process. Also, staff turnover was noted to have a negative impact on learning. One staff person commented on an unsafe environment.

Many other impediments to learning are not related to the program itself, but could potentially be addressed in the classroom. These include:

- behavior problems;
- hygiene problems;
- attendance;

- difficulty focusing;
- fear of failure and new ideas; and
- lack of parental involvement.

What Works for Instruction

Staff noted that many aspects of the Words Work! program contribute to successful instruction. Many agreed that teacher mentors and literacy home visitors provide a valuable resource to teachers. Sharing strategies between teachers and across sites was also cited as beneficial. Increased teacher training led to well-planned lessons, and some staff commented that a balance between smart planning and the ability to be flexible contributed to successfully meeting the needs of all students. One center manager commented that writing out goals and posting them reminds teachers to stay focused.

What Gets In the Way of Instruction

Staff reported that impediments to instruction are divided in the same manner as impediments to children's learning. Some are directly related to the Words Work! program while others result from characteristics of children and their families. In the first category, certain issues are staff-based. Two staff members reported not having enough time for preparation or reflection. Two center managers commented that staff turnover hinders instruction. Also mentioned were staff inconsistency, lack of bilingual skills and cultural knowledge, and failure to follow routines. Other issues are program-wide, including poor classroom management, lack of communication between staff and other support services, and limited materials. None of these issues, however, were cited by more than one staff member.

Other impediments to instruction concern children's and families' characteristics, and closely resemble the reported impediments to children's learning. These include behavior problems, poor attendance, language barriers, family mobility, and lack of family interest.

What Works for Families

Staff reported several strategies that worked for involving families this year. Many of these had to do with communication. Factors that staff said improved communication between themselves and parents this year included:

- sending home weekly newsletter;
- translating materials and meetings into parents' home languages;
- daily contact with parents;
- parents knowing how to ask better questions;
- sending home more books; and
- sending home specific activities for families to do at home.

Staff also reported that specific aspects of the program contributed to parents' increased involvement this year. The literacy home visitor was most frequently cited as a positive factor who both enhances communication and reinforces classroom activities. Having SPARK stories

available in the library and integrating Words Work! goals into parent-teacher communication were also cited as contributing factors.

What Gets In the Way of Families' Involvement

Certain factors continue to hinder increased family involvement in the Words Work! program. The most-cited of such factors was a language barrier. Family demands including other children, work schedules, and finances were also mentioned as hindrances to increased parental involvement. Staff also noted that families' attitudes about school and learning play a role in their involvement. Welfare-to-work time limits have also had an impact: newly working parents have less time for home visits and volunteering opportunities.

Suggestions For Improvement

Staff members had a number of suggestions for improving the Words Work! program. May of these had to do with further improving communication between families and schools, including:

- improving forms of communication besides newsletters;
- translating more paperwork into home languages;
- using bus drivers more for transporting paperwork home;
- using parent meetings for more meaningful connections rather than simply updates; and
- having a Words Work! workshop to explain program to parents.

Other suggestions had to do with increasing cultural awareness, including:

- increasing staff's ability to connect with families of different cultures;
- encouraging more parent involvement from all cultures; and
- training staff more in cultural childrearing.

Other suggestions were related to professional development, including:

- scheduling agency-wide trainings and orientations;
- defining best practices and how to implement them;
- better using professional development days;
- training staff in child portfolio presentation;
- adding a floating staff person to each center; and
- partnering with St. Paul Technical College to put student aides in classrooms.

Program Impacts on Work

Many staff members mentioned ways that they are now performing their jobs differently as a result of the Words Work! program. The most-cited example was that teachers are now teaching with intentionality. Staff also mentioned that they are getting useful feedback form assessment data and focus groups. They also reported that both RAP and MLC have become more aware of and focused on children's literacy.

Influence of Co-Workers

Words Work! staff generally agreed that their influence on their non-Words Work! colleagues has been subtle. Several commented that there is curiosity and interest in the program in non-WW sites. One mentioned that some of this produces envy at other sites. Others remarked that non-WW sites do not have the resources to perform WW tasks, or they feel that they already perform these tasks but avoid the WW paperwork.

Words Work!
2002 Strategies for Learning

Staff at all four Words Work! sites use a variety of classroom strategies to assist in achieving the program's literacy goals. The following list was culled from reports of classroom observations at the four sites.

Classroom Environment Strategies	
WW! Goal	**Strategy or Activity**
1. Print awareness-	• Writing table • Use classroom sign-in and then have kids take their names off and put in envelope before they go to play time • Sign up sheet to use the computer • Children's written letters—posted on bulletin board—some letters were waiting to be mailed • Children's writing samples posted • Kids write their names when they come in
2. Vocabulary	• "Life in Rain Forest" bulletin board with names like canopy, forest floor, etc. • Names on object in house • Story words on poster paper • Posters with sentences • SPARK concepts and title of story on white board • Words for "Twinkle, Twinkle Little Star" displayed • Labels on items in the class
3. Phonological Awareness	• Practice ABCs and sounds in group • Dictated stories, rhymes and songs on walls, desks, shelves
4. Alphabet	• ABC song during lice check • Alphabet cards • Sign language poster • Wooden alphabets • Children choose letters to sit on during transitions and teachers have them practice identifying the letters • Magnetic alphabet • Alphabet rug • Making letters with the play dough • Color magnetic alphabets on the white board • Playing alphabet bingo
Name activities:	• Alphabet posted throughout classroom • Students try to recognize their names on place cards before going to play area • Names on Velcro apple • Velcro name cards • Construction paper name cards

	• Paper with kids names by coats • Children write their names on their projects • Itsy bitsy spider display on heating pipes; spiders with kids names on them to help kids get in line and know how to line up • Children whose names start with certain letters get up and wash hands first
5. Numbers	• Poster with numbers • Numbers on wall and writing table • Numerous counting activities, such as counting verses in songs • Counting parts of snake • Large numbers over the window • Walk around block to count telephone poles • Counting in languages other than English • Use of feathers, marbles and other props for teaching counting
6. Shapes	• Border of shapes around bulletin board • Have children sit on different shapes on rug and call them according to shape
7. Language	• Role playing with animals, with students "teaching" animals what they are learning • Wide range of books
8. Parent-Family Involvement	• ABC book at-home activity • Parents visit, either to observe or help out with activities • Pictures of kids with parents on wall • Family tree with leaves and pictures • Compliment and complaint forms available for parents
9. Multicultural and Lingual	• Multi-cultural music • Some classroom object names in Spanish and English • Some instructions given in Spanish • Borders with different cultures • Multicultural dolls • Poster of shapes in English and Hmong • Colors poster in Hmong • Word posters in English, Spanish, and Hmong • Listen to songs in Spanish • Information translated into Somali for parent—but parent did not read Somali • Learning to count in English and Spanish in one class • Bilingual, multicultural books
10. Multi-sensory, Hands on	• Colors and manipulatives on science table • Sand table • Blowing bubbles • Follow the leader going under/over/around objects

	• Science center
11. Arts as follow-up	• Self-portraits • Children made fish as part of a school of fish • Children's faces with yarn and names • Fall leaves in bright colors with student names • Dressing up in adult clothes • Watercolors • Made telephones and practiced talking
10. Colors	• Colors poster • Names of colors at science table • Asked children to name colors during meals or small group activities • Asked children to name colors of objects in SPARK stories • Pasted orange paper pieces on pumpkin • Kids line up on feet that match the color of their coats

SUMMARY OF WORDS WORK! CASE STUDIES
YEAR 1 TO YEAR 3
June 2002
Prepared by Chia Youyee Vang and Victoria Amaris

INTRODUCTION

From Year 1 to Year 3, a total of nine children have participated in the case studies. During the first year of implementation, three children were randomly selected and three new students were added during each subsequent year. The demographics of the students are: three Hmong, three Latino, one African American, one Somali, and one Caucasian.
The new case studies for year three included student assessment results, interviews with the child's parent(s) in the fall, winter and spring and classroom observations. Informal conversations with teachers and activity sheets also informed the process. For the follow-up cases, interviews with the children's parent(s) took place in fall 2001 and in spring 2002. All parents were asked to share information about their children's interests, their involvement in their child's school, activities they did with their children at home, what is working well at Head Start and what Head Start might do better. When possible, the evaluators would ask the case study children questions.

GENERAL OBSERVATIONS

Several overall observations regarding the impact of Head Start on children's preparedness for school were noted, including:

- Preparing most children well for kindergarten and beyond;
- Impacting children's behavior and contributing to children's maturity;
- Supporting learning by providing strategies that are adaptable to children regardless of cultural backgrounds;
- Increasing early literacy skills of children to prepare them to be successful readers and learners when they are in school; and
- Increasing the family's role in the development and delivery of high quality early literacy experiences for their children.

CASE STUDY PROFILES

New Case Studies for 2001-02

From Year 3 "Youa." Youa is the fourth of six children. The mother does not work outside of the home. The father works at a company where he is an assembler. They have been in the U.S. for 12 years.

All of the interviews were conducted with the mother. The mother said that enrolling her daughter at Head Start is important in preparing her for kindergarten. She has seen significant changes in her child. She stated that her child knew very little English before going to Head Start. Toward the middle to the end of the school year, the child could speak English with her

older siblings. The mother credited her child's ability to count and print her name to Head Start. She said, "Her dad and I didn't teach her any of this. She knew how to count in Hmong from 1-10, but she did not know how to say it in English. It seems that she would learn certain things in school, and then older siblings would help her at home. Sometimes the kids would tell each other the stories that they were learning at school. [Youa] tells her older siblings her stories from Head Start."

The mother does feel that her daughter is very shy, so Head Start has been good for her. She is at least interacting with kids who are not relatives. The family does not have very many activities that they do together. At home, the children play with their toys and draw pictures. The father occasionally read to the children when he has spare time. However, the children seem to keep themselves busy with their own activities.

The evaluator read Goodnight Moon to the child in the fall. The child was able to point to a few of the different items in the story and named them. However, she did not know how a book worked. When asked what she liked most at school, she said singing and stories. During the second and third interviews, the child clearly knew how a book worked.

In fall 2001, Youa received a "yes" on many of the SPARK activities except, naming yellow, opposites, song, same, size, sequence, body, address, position, who, what if, own, feelings, similarities, group, events, answer, and sing. She got a 6 in book, a 2 in story and zeros on the other English phonological assessments. When the phonological assessments were given in her home language, she got a 7 on book, a 3 on word, 1 on story, and zeros on the rest. On the Boehm, she was in the 75th percentile when the instructions were given in her home language. She got 3 on the ABCs and was rated a 6 on attempt to print.

In spring 2002, Youa received "yes" on nearly all her SPARK activities except in short songs, address, and positional words. On the phonological assessments, she received a 7 (7 in home language)) on book, a 3 (4) on story, 0 (3) on Words, 0 (0) on sound and rhyming, 6 (0) on syllable. On the Boehm, she was ranked in the 50th percentile in English and 90th percentile in home language. She knew 25 letters of the alphabet and received a score of 6, the highest score, on attempt to print.

From Year 3 "Lupe." Lupe lives with her mother, father and brother. Her family has been in the U.S. for four years, all of which have been in St. Paul. Her mother is currently a housewife. Her educational background is completion of a high school degree. This is Lupe's second year at Head Start.

Status of Child

Lupe is very sociable, articulate and happy. She seems to like everything. During the fall interview, she preferred not to share and tended to scream to get her way. She liked to draw. During the second and third interviews, she was not bratty as previous and shared more willingly. She was also more polite and obedient and seemed more mature.
In the fall, she counted up to 10 and then skipped to 20, sometimes mixing Spanish and English. In the winter, she counted to 15, but could not identify separate numbers. During the spring, she

counted to 20 without skipping any numbers. Lupe can write her name and identify some other letters of the alphabet. However, her mother felt that she was going slower than her older brother. Lupe liked to copy print materials and knew most of her colors by the end of the year. She learned both from home and school.

At home, her parents mostly speak to her in Spanish. When Lupe speaks to her parents, she sometimes spoke English. Also, when talking to her brother, she would speak English. However, her mother encourages her to speak Spanish.

Head Start Involvement

Lupe's mother stated that she had enrolled her daughter in Head Start because she felt her daughter needed to know people, other than her family. She felt that this would not only help improve her behavior, but also, it would prepare her for school and help her learn English. Her mother knew her teacher and had met with her. She talked about being able to speak in Spanish with her child's teacher. She used everything that is sent home to help her child learn, including bilingual books, and activity sheets. Interesting, the mother said that she liked the bilingual books, but her daughter preferred to be read to only in English.

When she has concerns, the mother speaks directly with her child's teacher. Having a bilingual teacher is helpful to her. She also appreciated that the librarian speaks Spanish. What the mother valued most about her child attending Head Start is that the teacher is very good and helps her daughter a lot. She said that her "child demands a lot of patience and teacher and teachers have more patience than mothers. Teachers can get children to do things better than mothers." The mother credited her child's teacher for helping to improve her child's attitude and behavior. She is very satisfied with her child's progress and feels that Lupe is well prepared.

Activities at Home

At home, Lupe likes to read books, tell stories, and works on puzzles. She also likes to help with cooking and setting the table. When helping to cook, she counts things. Toward the end of the school year, she would write her name, cut, draw, cook, pretend to read books and memorize books, only in English. Activities that Lupe and her mother do together include, reading, cooking, drawing, counting activities, play outside, go for walks, and visit the children's museum. Her mother felt that reading, counting and talking about things help her daughter learn. Reading is something that the family is able to do regularly. The mother, father, and older brother all help Lupe read.

The mother identified several activities that support her child's learning. They included helping her to focus on writing, having a scheduled time for reading, and listening to the child when she wants to share her ideas. What is difficult for the mother is that she has difficulties reading in English, but her daughter prefers to be read to in English. She is interested in obtaining a library card, but does not know how to do so. The evaluator explained the process to her. The mother said that there used to be a home visitor, but there has not been anyone coming for months. She liked having the home visitor come and missed that interaction.

Student Assessment

In fall 2000, Lupe received a "yes" to all the SPARK activities. She was emerging in all of her shapes. On the Boehm, she was in the 16th percentile. The child was never tested in her home language. She received a 2 on her ABC's and a 4 on Attempt to print.

In spring 2002, she received a "yes" on all SPARK activities except on "Address" and "Ask What If" (new SPARK items); 7 on Book, 3 on Story, 2 on Syllable, and 0 on Word, Rhyming, and Sound. She was in the 28th percentile on the Boehm (in both home and English languages). She knew four letters and received a 6 on Attempt to Print.

From Year 3: "Fahima." Fahima and her mother came from Somalia and have been in the U.S. for five years, all of which have been in St. Paul. Her father and siblings are still in Africa.

Status of Child

According to her mother, Fahima likes speaking English. She can be both social and fearful. She likes to color, read, count and say the alphabet. She counts to 10. At home, they speak both Somali and English. Her mother said that she learned the skills both from home and school. Her English skills improved a great deal during the year. She is focused and writes her name well. By the end of the year, she can write titles of books, make books and seems to like to handle them. Her teacher said that she is a perfectionist and is sometimes hard on herself.

Head Start Involvement

Fahima's mother's reason for enrolling her in Head Start was that her daughter needed to learn more things, improve her English skills to prepare her for kindergarten. The mother does know her daughter's teachers. She mostly used the books and newsletters to help support her daughter's learning. What the mother valued most about her daughter attending Head Start is, "She has become better at expressing love to family. She obeys better and plays better with other children. She also reads better." The mother would like to see more computers available at Head Start and more work activities. However, she is very satisfied with her child's overall experience.

Activities at Home

At home, Fahima does the following activities: color, count, read stories, attend cultural activities in the Somali community, and other activities to learn about her culture. The mother does help her child with homework, but because she is now working full-time, it is difficult to do many things with her child. She does have some people in the Somali community who helps her daughter with reading books.

Questions for Child

When asked what she is learning at school, Fahima said that she was learning her numbers, colors, playing, and computers. She said that she liked everything, especially coloring and playing. She said that she did not like puzzles and books. However, classroom observations and conversations with her teacher reveal that she does like books and puzzles.

Student Assessment

In the fall, she received mostly "yes" on the SPARK activities. She had a good understanding of a book and received a 6. She received a 2 for story, 3 for word, 0 for rhyming, 2 for syllable, and 2 for sounds. She was in the 17th percentile on the Boehm. She knew 11 letters and received a 4 on attempt to print.

In spring 2002, Fahima received "yes" on all SPARK activities; 6 on Book, Word, and Syllable, 4 on Story and Sound, and 2 on Rhyming. She was in the 12th percentile on the Boehm, knew 24 letters of the alphabet and received a 6 on Attempt to print.

Follow-Up Cases

From Year 2 "Neng." Neng is attending HOPE Academy charter school for the 2001-02 academic year. She is in first grade. As the youngest child, she receives help from her older siblings. Her father works first shift while her mother works the second shift. According to the mother, the family is in a very stressful situation with both parents working and hardly ever seeing each other. The mother feels that she has very little time to spend with her children. Since she works in the evening, she is not able to be with the children when they come home at night. She cannot attend conferences so her husband has to do so. She stated that her husband was satisfied with their daughter's progress in school. Her teacher thinks she is doing well, but is still quite shy.

The mother said that she had seen great improvement in her daughter's ability to speak English. She gives her teacher a lot of credit and expresses concerns for her own lack of time to be with her children. She stated, "We barely have time to eat together once or twice during the entire week. There is no time in our live for activities, especially during the cold season."

When asked to recite the letters of the alphabet, the child could do so. The evaluator wrote the letters of the alphabet and asked the child to read the letters out of order. The child was able to recognize all letters of the alphabet. The mother credited her husband in addition to the older siblings and her teacher for this progress. When asked what she liked most at school, she said that she liked singing songs and coloring. In the spring 2002 interview, the child could sound out several words, such as "she," "he," and "go."

From Year 2 "Miguel." Miguel's father has always lived in the U.S. while his mother is from Mexico. His parents have a licensed home day care business. She is a housewife while he works as a security guard. His mother has a high school diploma while his father completed 10th grade. He has two older brothers.

Status of Child

Miguel is still very sociable and likes to see friends and family members. He has changed in that he is more talkative to everybody. He likes homework and is proud. He does not like to sit in one place or listen to the instructor. He can now count to 100, with a little help in tens. He knows his ABC's and colors. The parents teach him at home and he also learned from school. At home, the parents mostly speak Spanish to him. The child usually responds both in English and Spanish; however, English seems to be preferred by the child unless in an environment that only Spanish is spoken.

School Involvement

Miguel was in all day kindergarten, so it took some time to get used to it. The parents know their child's teacher and feels that she is a good teacher. They usually use the materials or homework that Miguel brings home to help him learn. The parents feel comfortable talking directly to their child's teacher if they have concerns or questions. They said that their son really likes to be in school and that he is learning and being responsible. They are quite happy with their son's progress in school and like the fact that there are a lot teachers.

Activities at Home

According to his parents, Miguel likes to be active. He now plays the piano and likes to color a lot, especially shapes and patterns. Activities that they do with their son include homework, talking about different things, and going to church. His parents think that the bible stories to teach their son what is right and wrong. Reading at night and doing homework together also help to their son learn. They read to their son three to four times per week. The parents try to "make sure he completes his homework and discuss what happened in school to help his memory." Some things that gets in the way of their son's learning is that he wants to be outside too much, the younger children bother him and that he likes video games a lot.

Questions for Child

Miguel said that he was learning a lot of things at school. He mentioned sharing, making pattern snakes and books. What he liked most about school was going outside, breakfast, eating ice cream and snack time. He said that he did not like math.

From Year 2 "Jenny." Jenny's family has lived in St. Paul for eight years. There are three children in the family and she is the youngest. Her mother's educational background is one year of college. Her occupation is housewife/child care. The family has moved away before the end of the school year, thus the child will no longer be participating in the project.

Status of child

Jenny appeared to shy at first, then became "a talker." She is friendly, outspoken and caring. She said that she did not like yelling. She likes to read and write as well as make things for other children. She is exceptionally good, but sometimes gets angry with her older brothers. In the

fall, she counted up to 15 and in the spring, she could count to 20. She learned her ABCs, counting and colors at home, day care and at Head Start. The primary language is English.

Head Start Involvement

Jenny's mother indicated that she enrolled her daughter in Head Start to help prepare her for kindergarten. She stated, "So she can be around other children. Be in a more learning environment and be ready for kindergarten." The mother knew her child's Head Start teacher by name and had met with her. Throughout the school year, she used materials provided by Head Start to help her child learn, such as SPARK stories, newsletters, and sheets. When she had questions, she would contact the Head Start center manager. She did, however, expressed some concern about the center manager needing to be more available. What the mother valued most about her child being at Head Start is "that she loves being there. She's sad when not there." Additionally, Head Start is "preparing her for the next grade, interacting with others..."

Although she is very satisfied with her child's experience at Head Start, Jenny's mother said that she would like parent meetings to also be held in the evening so she can attend. This last school year, the meetings were switched to day time, and she could not attend any of the them.

Activities at Home

Jenny's mother said that at home, she eats, watches some television, and sometimes plays with her Barbie dolls; however, she would mostly read and write. During the spring interview, her home activities included computer work with the above activities. Her mother felt that practicing to write her name, numbers, reading and using flash cards help her child to learn. She read to her child four to five times a week. Jenny's older brothers also help her with reading. Some challenges that get in the way of her helping her child's learning included household duties, personal issues, and other kids. Household chores make her tired, which makes it difficult for her to do more. There are a few activities outside of school that help her daughter learn. They attend church where her daughter is able to read books and look at Christian news. Additionally, the family goes to the library.

Questions for Child

When asked what she was learning in school, the child responded that she was learning her ABC's and reading a book. She said that she liked to write her ABC's most at school. She seemed to like everything at school, with the exception of taking a nap.

From Year 1: "Rosita." The following case study is based on activities carried out over the past year as part of the follow-up case study. Included were two in-depth interviews with the parent, and questions for the child; reading time with the child. No observations of child in kindergarten classroom were made, nor was there access to her school data.

"Ana," the mother of the child is a 41 year-old Latina who immigrated from Mexico 15 years ago. She and her family have lived in St. Paul for four years. The family includes three children, with the case study child being the oldest, at nearly six years of age. There has been a

move to a new home, much larger and nicer. It is also one block from where Rosita goes to kindergarten. The husband does not appear to be part of the household at this time. Spanish is the primary language at home.

The child in kindergarten

This was Rosita's first year in kindergarten. This year she continues to be sociable, inquisitive and very much a communicator. She is more able to express her feelings and is also more patient and focused in her attention. Her listening and reading skills have also developed more.

Her mother reports that she has performed very well in school and has benefited from being in a bilingual classroom. Her Spanish is clearly stronger than before although she had previously been exceptionally bilingual. She has learned more about her two cultures and is a proud Latina. Her teacher has helped her to learn to be calmer and to improve her behavior.

The child is also very proud of her progress and excitedly shared the many things she does well at school: reading, drawing and coloring inside the lines, "cutting very well"/ "cotando muy bien." Without prompting, she offered to read to the evaluator at the last interview. She read from own book and sounded out letters when she needed to in Spanish.

In summary, it appears that this child has been prepared well for learning through her Head Start experience. It nurtured her love for books and learning and also provided the focus she needed, giving her a solid foundation for future learning. The fact that she is in a bilingual kindergarten classroom is an added value to maximize her learning in two languages.

In her own words, Rosita excitedly told the evaluator, "The class can be interesting and I can do things very well."

From Year 1: "Debbie." Debbie is one of five children and lives in a two parent household, where she is the youngest. Her mother is a housewife and does elder care on a part-time basis. The mother is a 31 year-old white woman who has lived in St. Paul her entire life. Her educational background is completion of 11th grade.

Debbie finished first grade in spring 2001. Her mother reports that she is doing very well. She remains sociable and has many friends. She is physically large for her age, which her mother feels brings its own challenges. She likes to be heard and express her opinions. She can now count past 100 and likes numbers.

She enjoys reading and reads everyday. She reads labels, the cartoons in the paper, large print books, books from school and the library. In the car, she writes letters and now enjoys using her computer skills. But, some reading is difficult for her and her mother feels she should be reading at a higher level.

From Year 1 "Tou." Tou still attends Maxfield Elementary school and is now in second grade. Both parents were present for the fall interview and the spring interview was conducted only

with the mother. The mother lost her job in September, and it took her several months to find another one. The father still works a second shift job as a machinist.

The father was still concerned about the progress his son was making in school. The child seems to understand things, but often does not respond when asked questions. His teacher feels confident that he is moving in the right direction, but the father stated that he felt his son was not getting the help he needs.

At home, there are not much activities for the child except watch television and play games with his brother and sister. On weekends, the family usually spend time at relatives' houses for different cultural events. The child then plays with his many cousins.

The evaluator read the book, The Paper Crane, to the child in English. She then read it in Hmong language. His siblings came over and listened with him. She also asked him questions about the front of the book, the back and what does the author of the book do. The child always responds in Hmong language even when a question was asked in English. He said that he liked drawing most at school and playing with his friends.

During the spring interview, the child printed all the letters of the alphabet and was able to speak more fluently in English. He still mixed Hmong words in his sentences.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: The Long-term Impact of Words Work!

Author(s): Action Consulting and Evaluation Team

Corporate Source: The Saint Paul Foundation

Publication Date: Unpublished

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: John G Couchman

Printed Name/Position/Title: John G. Couchman, Vice President

Organization/Address: The Saint Paul Foundation, 55 Fifth St. E., Saint Paul, MN 55101-1797

Telephone: 800-875-6167 FAX: 651-224-8123

E-Mail Address: jgc@saintpaulfoundation.org Date: 4/1/03

NAEYC's 12th Nat'l. Inst. for Early Childhood Prof. Dev. (Portland, OR, June 15-19, 2002) (over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	Karen E. Smith, Assistant Director ERIC/EECE Children's Research Center University of Illinois 51 Gerty Dr. Champaign, IL 61820-7469

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 2/2000)

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC®

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: WordsWork! Three Year Evaluation Report

Author(s): Cheung, S., Donovan, S., McKendall, V., Vang, C. & Zaragoza, A.

Corporate Source: The Saint Paul Foundation

Publication Date: unpublished

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: John G Couchman

Printed Name/Position/Title: John G. Couchman, Vice President

Organization/Address: The Saint Paul Foundation, 55 Fifth St E, Saint Paul, MN 55101-1797

Telephone: 800-875-6167 FAX: 651-224-8123

E-Mail Address: jgc@saintpaulfoundation.org Date: 12/1/03

NAEYC's 12th Nat'l. Inst. for Early Childhood Prof. Dev. (Portland, OR, June 15-18, 2003)

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	Karen E. Smith, Assistant Director ERIC/EECE Children's Research Center University of Illinois 51 Gerty Dr. Champaign, IL 61820-7469

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 2/2000)

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC®

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: The Long-Term Impact of Words Work! Year Two Analysis

Author(s): Action Consulting and Evaluation Team

Corporate Source: The Saint Paul Foundation

Publication Date: Unpublished

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: John G Couchman

Printed Name/Position/Title: John G. Couchman, Vice President

Organization/Address: The Saint Paul Foundation, 55 Fifth Street E, Saint Paul, MN 55101-1797

Telephone: 800-875-6167 FAX: 651-224-8123

E-Mail Address: JGC@saintpaulfoundation.org Date: 12/1/03

NAEYC's 12th Nat'l. Inst. for Early Childhood Prof. Dev. (Portland, OR, June 15-18, 2004) (over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	Karen E. Smith, Assistant Director ERIC/EECE Children's Research Center University of Illinois 51 Gerty Dr. Champaign, IL 61820-7469

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 2/2000)